SAFETY NEWS

NEWS BULLETIN . . .

National Safety Council Gets U. S. Charter (See page 17)



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for Asphyxia emergencies

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SAFETY NEWS

SEPTEMBER 1953

THE COVER: Constant vigilance is needed to protect forests against fire. The illustration shows a typical Pacific Northwest mountain top fire tower, with radio-equipped truck in foreground. The kneeling men are studying a map of the area. (Photos courtesy Weyerhaeuser Timber Company)

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National Safety Council



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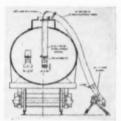
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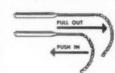
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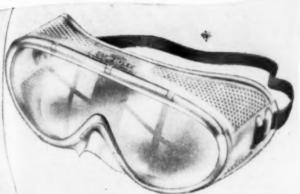
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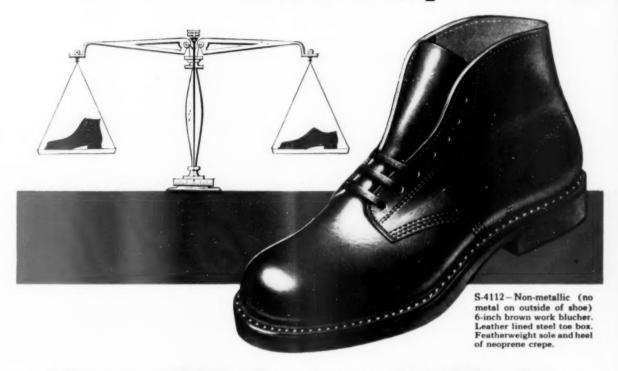
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this shoe gives soothing day long foot comfort.

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Another Outstanding industrial sole

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SAFETY SHOES



NATIONAL SAFETY NEWS

SEPTEMBER, 1953

Leaders or Specialists?

WHAT has become of the old-time handyman who could fix anything around the house? The devices of this mechanized age have become too complicated for his natural skills and instincts. So now we call up the distributor who sends out a specialist with a narrow range of skills.

Lack of versatility is plaguing industry all the way up the line—nowhere more than at the higher levels. There have been many complaints about the diminishing supply of executive talent. Some blame it on the increasing demands of business and industry; others on the paralyzing influence of a planned society in which trained specialists are content to slip into special little niches.

Business needs executives who have wider knowledge, more general savvy and enough background of the right kind to run a whole group of things, John L. McCaffrey, president of International Harvester Company, told a recent graduating class at the University of Chicago. Presidents toss plenty over the problem of finding men with these qualifications, he added.

Is this state of affairs due to collectivist philosophies which are impairing the will to leadership? That would be an oversimplification of the problem but the charge cannot be ignored.

Job specialization, to many college students, offers greater security. Perhaps management has been partly responsible for this attitude. In picking talent for executive training, business has been inclined to ignore the liberal arts graduates in favor of those from schools offering less background but more specialized training.

And among the qualities of leadership there is no substitute for character.

"The task and the privilege of colleges is to make significant contributions to the development of more and more good men as well as good scientists," said Thomas E. Murray, Commissioner of the U.S. Atomic Energy Commission, in an address at the Centennial of Manhattan College. "It is not enough to be merely a technician," Mr. Murray continued. "Unless the technician, at least in some small way, is enamored of the idea of becoming a saint, he will fall short of attaining real success. A learned educator characterized the mere technician as 'a man who understands everything about his job except its ultimate place in the order of the universe."

"With all thy getting, get understanding," said the wise writer of *Properbs*. The word is too comprehensive for definition here, perhaps too complicated to be acquired in a lifetime. But it should be a constant challenge.

National Safety Council Granted Federal Charter

WORD WAS RECEIVED as this issue was going to press that the National Safety Council has been granted a federal charter.

The bill chartering the Council was passed by Congress August 1 and signed by President Eisenhower August 13.

The Council is one of the limited number of public service organizations to receive such governmental recognition, and directors, trustees and officers of the Council believe it will increase support for a more effective national safety program.

The charter will not, on the other hand, change the organizational plan of the Council. Control will remain in the hands of the directors and trustees, operating under the provisions of the constitution and by-laws. No federal appropriations are provided, and no changes are made in membership services and dues arrangement.

A full report of the charter and its effect on the Council's scope and activities will be given in the next issue of this magazine.

Safety Through Accepted Rules

By MATHEW M. BRAIDECH

Our best controls grow out of group thinking. Safety codes and standards have been the result of formalized procedure in bringing together our experience and specialized skills

THERE is no such thing as absolute safety. Actually when we speak of safety, we imply some form of organized effort to insure reasonable safety.

Safety should be regarded not as an end in itself but rather as a challenge to maintain good operation and correct errors and unsafe conditions that occur in the wake of our industrial progress.

This discussion will emphasize the importance of improved codes and standards, and the need for responsible support for their fuller compliance in everyday practices through organized programs.

The outstanding code program now under way is the one which the American Gas Association is undertaking jointly with the American Society of Mechanical Engineers, with the collaboration of the National Board of Fire Underwriters. Such a formalized procedure of bringing together the best talents and specialized skills in the field should carry forward this sizable task to an early completion and prove that our best controls grow out of group thinking.

Safety, in its simplest terms, connotes exercise of care, a better way of doing something to avoid harm, injury or risk, including correction of dangerous practices and hazardous conditions. It is

simple to describe but difficult to put to practice. There is danger that in our intense preoccupation with present-day technical problems, we may be acquiring the tacit assumption that safety is a matter of minor consequence or that it would somehow be worked out in the natural course of events. Perhaps a hurried, scanning review of the modern tempo of our industrial changes will show more forcibly the need for a more aggressive attitude towards development and application of better safety measures.

We must not lose sight of the fact we have one truly outstanding national trait—we are on the move all of the time. It is almost a platitude to point out we have acquired more inventiveness and practical initiative than any other group of people. Behind our accomplishments has been the motivating force to get things done, energized by the desire to live better, have more, work less, and enjoy life to the fullest, which is the ideal and heritage of every human.

Our Dizzy Pace

Our generation has seen the greatest industrial expansion in history. We are currently in the midst of scientific and technical changes that are growing at an increasing rate. While it took the steam engine 100 years, the electric motor 50 years, and the internal combustion engine, vacuum tube and radio 25 years to become

standard parts of our industrial and economic makeup, it has taken television, synthetic rubber, plastics, miracle drugs, jet propulsion, not to pass up atomic energy, less than 10 years to become something more than promising realities. Today, most new developments are passing in great numbers from theory to commercial application in a matter of a few years rather than decades.

Incorporation of new ideas and improvements in various manufacturing operations is placing increasing demands on our engineers to provide new equipment, new materials, new designs and new operational techniques, with the result that today less than 20 per cent of the total labor force in the United States is classified as unskilled labor. This has been accompanied by a trebled increase in capital investment per worker, calling for a greater share of individual responsibility.

A great deal of our early progress came about through desperate chances and calculated risks, which were, at times, improperly safeguarded due to lack of suitable know-how. Until late in the 19th Century, safety was not a part of our industrial habit, nor was it a part of management's thinking. In many segments of our early industry, directionless work methods were the order of the day. Risk was assumed on the part of the worker, and any mishaps were regarded as thoughtless personal faults or acts of contributory negligence.

MATHEW BRAIDECH is Director of Research, National Board of Fire Underwriters, New York City. This article was taken from a paper presented before the American Gas Association's Production and Chemical Conference in New York City, May 25, 1953.

At the turn of the century, however, with activities of insurance groups, government safety agencies, organized labor and trade groups, our industrial production system gradually took on a pattern of broader responsibility. It was eventually recognized that safety and production go hand in hand, and hazards are costly economic factors. Losses suffered through wastage of time, damaged material, and destroyed manpower have served to emphasize organized safety as an essential part of efficient operation and good management. Safety has thus come to mean far more than mere safeguarding of machinery.

The Cost of Doing Without

Like the old story of not seeing the forest for the trees, most of us have taken safety as something for granted. Like many other activities of value, safety also has two costs-the cost of doing it and the cost of not doing it. We can find today in every one of our industrial groups some companies or plants, both large and small, that have excellent safety and fire loss records. Others have poor records, even though in many instances there is much similarity in operational facilities, hazard potentials, and quality of labor. It appears that those cognizant of the value of safety have good programs and outstanding records, and those with poor programs have poor records.

It would in all probability be found that in the latter situation. either no real effort at safety was made or that there has been a laggard application of existing safety knowledge, or simply plain lack of interest. In some instances safety has been accepted in theory and disregarded in practice. Many industrial groups, on the other hand, have made remarkable progress in improving and collectively maintaining their safety rating as the result of a concerted industrywide effort to follow established safety rules. It may be found that some of these industries have operating conditions at least equal to

Don't Be Half Safe!

AN expert anatomist, or some other such type individual has recently proclaimed there are 13 danger spots on the human body that even your best friend might not tell you about. Whether you use a spray, a stick, a cream, a liquid—or whether you use the original in the plastic bottle, the substitute, the creatz—the he-man type aroma or the "come lay me in your arms and woo me to sleep type,"—you must be sure to control all 13 danger zones.

After considerable puzzlement and confusion as to just what these thirteen danger zones might consist of,—not being able to locate more than five or six by my lonesome—I got a few of my rover-boy type friends together and we did a mess of research. I'll admit we had our troubles, but I'm proud to report our findings.

The 13 spots we should all be extremely concerned about are: the two eyeballs, the two nostrils, the hands which come in two packages of five fingers each, the feet which come in two packages of five toes each—(at least five is the standard number), the trunk (posterior and anterior), the two legs and the two arms. I do believe we have arrived at the magic number.

Now, you take one safety man, full or part time, and stir well with a batch of goggles, respirators, gloves, safety shoes, arm and leg shields, and asbestos and leather aprons. You then add a few, mellow, seasoned, expert type foremen, a well-laid-out building, meticulously kept (at least so you are able to climb down the aisles)—and for the "coop de grass," you add one pretty nurse, preferably in a 100,000-volt statically charged clinging type nylon uniform—and man, you've got the jazziest type of 13 danger spot protective potion that a young red-blooded American boy ever laid awake nights thinking about.

I just talked myself into busting out and mixing up a batch. What'll you have?

ROBERT D. GIDEL, Senior Engineer, Industrial Department, National Safety Council

or even more dangerous than those whom they surpass in their overall safety standing.

Standards in Safety

Safety in any form is a matter of proper understanding and will-ful cooperation, and the best form of safety control is attained through self-regulation with voluntary standards of good practice. In this regard, inept use of the word "rules" merits some thought. Some think the word is too suggestive of restraint and disciplinary measures. It has been said Americans object to being told to

do something with too official direction. Being of a democratic mind, they normally resent any semblance of regimentation. Perhaps, that is why rules are often a challenge to break them. Since we are concerned with the acceptance as well as with development of suitable safety measures, perhaps substitution with the more receptive phrase "good practice recommendations" or the preferred use of such words as "codes" and "standards" would be a desirable step in this direction. Again, it must be remembered that technical

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Before lightning protection was developed, lightning caused many fires in wood-roofed tanks, even when wood was covered with iron sheeting.

Fading Menaces in The Oil Industry

By GEORGE F. PRUSSING

LIGHTNING. Once the cause of nearly half the oil industry's annual fire loss, has been reduced to a small fraction of that figure.

STATIC FIRES. Once a nuisance because they offered an opportunity for lying about culpable negligence with respect to real fire causes, are now well under control. They never amounted to more than a small fraction of one per cent of the fire loss; now they are almost freaks.

STRAY CURRENTS. Fires from this cause are even more rare, but cathodic protection may upset dependence on pipe grids as lightning dissipators by breaking up these grids with insulating flanges.

ON THE MORNING of April 7, 1926, workmen assembled for the day shift at Union Oil Company's San Luis Obispo tank farm. A storm was blowing in from the ocean and before the men had left the field office, lightning struck somewhere in the tank farm. There was a terrific explosion as two reservoir roofs were lifted high in the air. Shortly after, with another flash, a third reservoir roof was blown off, and the oil industry's greatest single fire was under way.

The pipe line terminal at San Luis Obispo was typical of many in California. In addition to the usual steel tanks, some with wooden roofs and some with steel cone roofs, there were six concrete reservoirs, with wooden roofs.

Three of these had been built during one of the early periods of over-production and were about one million barrels capacity each. Three others had been built during a second such period and held 750,000 barrels each.

All oil stored in the reservoirs was crude, some heavy and some light—that is, some low and some high in gasoline content. The three reservoirs that blew up were in light crude service. As these reservoirs burned, boilovers carried flaming crude oil to the older three reservoirs, and as they in turn boiled over, to the steel storage tanks.

Twenty-six hours later and 250 miles away, the same storm repeated its attack on a similar tank farm near Brea, Calif. Here three reservoirs and a small refinery were lost.

Lightning is no stranger to the oil industry, even in areas of low

lightning incidence. Most of the losses have been associated with wood roof tanks and concrete reservoirs, but where lightning protection designed for wood roof structures has been installed, it has given practically 100 per cent performance.

Because of this protection and slow but steady elimination of wooden roofs for tanks storing low flash materials, the oil industry's lightning problem today concerns the occasional ignition of an all-steel supposedly vapor-tight tank, and an occasional ignition of a floating roof tank at the annular seal between deck and shell.

Many Hits, Little Damage

With these two exceptions, the industry has been practically free from lightning damage. It is undoubtedly true that with its tall steel vessels, and, lately, the steel frameworks of its cracking plants, more lightning strokes are taken by the oil refineries than ever before. However, damage has been practically nil to structures that have been struck and they in turn have undoubtedly shielded scores of smaller units clustered about them.

We do not generally find lightning protection as such in oil refineries. It is common practice, however, especially among engineering contractors who do construction work for the oil industry, to bond distillation towers, vessels, heaters, etc., to an intricate wire grid which in turn is grounded to a water well or otherwise grounded. In addition, all of these vessels are inherently bonded by inter-connecting piping, structural steel, or both.

Experience has not indicated any hazards from lightning in these plants other than a rare explosion of a steel-roofed atmospheric type storage tank when struck by lightning. These instances are so unusual as to be regarded as freaks by fire protection engineers. The number is in the neighborhood of one a year out of more than a billion barrels of oil storage.

The mechanism of ignition in most cases has proved to be vapor leakage through perforated roofs or open hatches. There is also some thought that arcing may take place between roof plates and steel rafter. These plates are thin and lie on the rafters without benefit of bonding; their attachment being only at the periphery, where they are welded to the top angle of the tank shell. Most of us are still skeptical on this subject.

Static

In "baby lightning," or static, we have some unique problems. Petroleum being dielectric, has the capacity of separating and holding electrical charges, particularly holding them on large free oil surfaces exposed to air or vapor. Here the potential gradient may become steep enough to cause sparkovers along the oil surface to the tank shell, and with the coincidence of a proper vapor-air mixture, explosion will follow.

The rarity of such occurrences speaks well for the infrequent coincidence since the generation of static charges undoubtedly occurs every time an oil tank is filled with any degree of turbulence. Only because it is difficult to get the proper vapor-air mixture at the

George F. Prussing, Washington, D. C., is a consulting engineer in the field of fire protection. For many years he was safety engineer for the Union Oil Company of California, Los Angeles, having organized the company's safety program in 1923. The accompanying article has been adapted from a paper presented at the Winter General Meeting of the American Institute of Electrical Engineers, New York, January 21, 1953.



Occasionally lightning sets fire to the vapor escaping from the seal of a floating roof tank. Steel-roofed tanks rarely explode when struck.

precise time and place where the static spark can occur, is the frequency of these tank explosions so low.

A typical incident of this sort was reported from England in 1951. A tanker was discharging gas-oil at Avonmouth Docks near Bristol. Gas-oil is a high flash material which could not in its normal state give off enough vapor to be ignited by a static spark. However, in this instance, the arrangement of the tank piping was such that all of the other factors needed for a static ignition were constantly present. The oil was conducted into the tank through an over-shot pipe and the oil fell from the height of the tank roof. Great turbulence naturally resulted. Furthermore, since the discharge was from a tanker, there was undoubtedly a certain amount of water entrained in the oil.

In this instance, a shore tank blew up and by a chain of misadventures, the entire plant was lost by fire. Later investigation disclosed that gasoline was being carried in one of the ship tanks adjoining the gas-oil, and that the gas-oil was slightly contaminated as a result of leakage through the bulkhead. It was undoubtedly this slight gasoline contamination that provided the correct vapor-air mixture for the explosion in the shore tank.

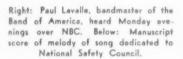
The oil industry has attacked this particular static problem almost solely from one angle, and that is to reduce the turbulence of oil flowing into a storage tank to a point that has proved to be safe. Obviously, no grounding of the tank or piping would serve any purpose here, and no system of internal bleed-off wires or grids could economically be installed in all tanks to take care of so rare an occurrence. Nor would it be economically sound to provide an artificial inert atmosphere above the oil every time a tank was filled.

Experience has proved that with respect to gasolines, such explosions have occurred less frequently, due undoubtedly to the —To page 127

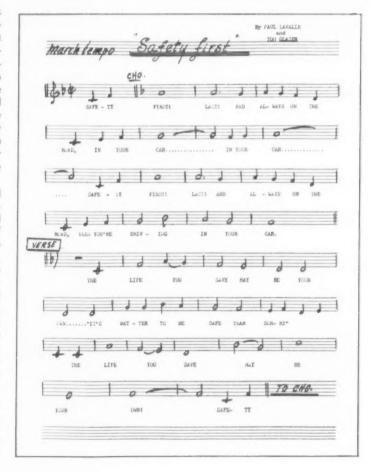
Dedicated to the Council

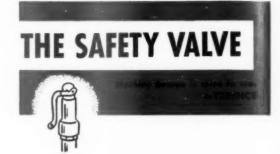
A SAFETY SONG, composed by Paul Lavalle, bandmaster of the Band of America, and Tom Glazer, was recently featured on the Cities Service Company's program on NBC

Composed in march tempo, the tune incorporates an old Scottish air which has been used in a once popular hymn: "There is power, power, wonder-working power; there is power in the blood of the Lamb."









A Professor Speaks

THE "human relations" approach to industrial accident prevention continues to be effective, while the management-engineering approach of providing safe working conditions is nearing its practical limits.

This is the conclusion of an article, "Industrial Health and Safety in the United States," in the summer issue of Industrial and Labor Relations Review, published by the New York State School of Industrial and Labor Relations at Cornell University. The authors are Herman M. Somers, chairman of the Department of Political Science at Haverford College, and his wife, Anne R. Somers, formerly an economist with the U. S. Department of Labor.

The human relations approach utilizes the newer discoveries in industrial psychology, the authors state. It is still making headway in eliminating human accident factors: inadequate instruction, poor supervision, fatigue, boredom, carelessness, poor discipline. The worker is taught not only how to do a job safely but also to want to work safely. Further, both labor and management now clearly understand that industrial safety requires cooperative activity.

That is sound, orthodox safety doctrine. But the authors are on less solid ground when they state that accident prevention by providing safe working conditions is approaching its practical limits.

That may be true in some of the larger and more progressive concerns. But in a large section of industry, engineering for safety hasn't yet reached the point of diminishing returns. And even where approximate perfection has been attained it is all too easy to slip.

Discussions of the respective merits of engineering and education have often generated more heat than light. Actually, there is no conflict between the two. The engineer with broad training and experience knows the best mechanical set-up is at the mercy of some human being who may have a lapse at a critical moment. So he does the best he can to offset the results of human failure.

Looking at it from the other side, many of these human problems can't be separated from the environment. It's quite true that some good safety records have been made in shops that couldn't be photographed without showing poor housekeeping and glaring hazards. And in spite of far from perfect working conditions you may find a good attitude toward the job and toward safe work practices.

But the fact remains that poor lighting, inadequate facilities for personal cleanliness, dirt, disorder and physical hazards do cause a vast amount of discontent. Under such conditions, supervision becomes more difficult and instruction may fall on unresponsive minds.

Compensation, it is widely believed, is management's strongest incentive. But the authors discount its importance in the over-all safety picture.

It appears, they point out, that compensation has a marked initial effect upon prevention activity, but it eventually spends itself and other motivations must replace it. . . Potential savings in premiums are minor compared to other economies. Employers are evaluating new health programs less in terms of their effect upon compensation than upon the more costly factors of absenteeism, labor turnover, and morale.

In turning the spotlight on these often overlooked values Dr. and Mrs. Somers have performed a real service to safety.

In This Issue . . .

EVERY TIME a householder goes to the hardware store he can be thankful for standardization. So can the merchant. Just imagine the problems of many a simple repair job without standardized screw threads. In the field of safety, codes and standards, developed through bringing together our best minds and skills, are protecting people at work, at home, and in transit. (Page 18)

Safety, according to a widespread belief, is something that can't be overdone, but that idea won't stand analysis. Wherever there is movement, there is hazard, and while there is life there is movement. Even staying in bed isn't a sure preventive; a chunk of plaster might drop from the ceiling, or the house might burn down. And in industry many a program has collided with a stone wall because an overzealous safety man demanded all or nothing right at the start, regardless of cost or effect on operation. Start gradually and show results before going to the boss with your big schemes, is the advice of a safety man who writes under the pseudonym of "Hardlee B. Hurd." Sorry, we don't know his name. (Page 24)

Carman Fish

Let's Be Practical

By HARDLEE B. HURD

The idea which is simple and gets results without unfavorable reaction is usually the right one—or pretty close to it

SOMEONE advised a thoroughly inexperienced fellow, who was dashing into accident prevention work during the last war, to "remember to do whatever will accomplish the most with the least effort." For any successful executive this is a fundamental. Since a safety engineer, or whatever an accident prevention man may be called, is successful largely to the extent to which he functions as an executive it is important that he never forgets the mandate for maximum results with minimum effort. This may be called dignified laziness but it is also a prime incentive behind what is popularly called progress.

Progress in accident prevention—sustained progress—requires endless, practical, direct attack on conditions which cause accidents. No matter how elaborate a safety program may be, its days are numbered if it lacks this practical, direct attack.

In addition to fundamental knowledge of accident prevention a safety engineer must have ability as a salesman. He cannot escape the necessity for maintaining a broad front of influence. He must sell the importance of accident prevention down the line organization and across the staff organization. The general idea of accident prevention does not need selling but its urgency and appli-

cation must be sold and resold.

If a safety engineer thinks the boss isn't sold on safety, one of two things is wrong: either the boss hired the wrong man, or the man isn't measuring up to what the boss thought he hired. Every salesman must have a sincere belief in the rugged, sterling worth of his product and it is so in selling accident prevention work. With little more than that simple credo many of our outstanding safety men have risen from incongruous backgrounds and with educational deficiencies which defy many current ideas.

It is true that fields of work are increasing where specialized advanced training is essential for a safety engineer. Atomic energy and chemicals are examples where safety engineering has become highly specialized. Various engineering backgrounds are valuable if not mandatory in others. However, there remain many important accident prevention positions in industry where executive and selling ability coupled with general accident prevention know-how is more needed than advanced technical training.

The General Practitioners

In this matter of education there is a differentiation to be noted between the general practitioner type of safety engineer and the specialized consultant. One of the obstacles to professionalizing the safety engineer is the vast scope of accident prevention. There are today many hundreds of men

working full time in all sorts of industries at the job of preventing accidents, which often includes fire prevention.

These are the general practitioners of safety; by necessity, jacks-of-all trades. They deal with electricians, chemists, medical doctors, mechanics, ventilating engineers, lawyers, inspectors, executives and just about every other type of specialist. These men are for the most part not professional engineers. They are coordinators. They are salesmen. The most successful of them have worked themselves into executive types of functions whether their compensation and titles reflect it or not.

The Specialists

This does not mean that they live at their desks. On the contrary, the best of them often end a day with greasy hands and soiled clothing. But they are selling safety and using leg work plus executive methods to do it. They are ambassadors-at-large. They do not usually have the answers on the tips of their tongues. They have to go and get the answers and they do get them. They are like the hundred-thousand-dollar-a-year executive who said to a visitor. "I don't know the answers to many of the questions: I just know which of these buttons here on my desk I must push." The safety engineers riding the big jobs know which buttons to push and they push them at the right time.

On the other hand, the specialized consultants, who are not the

This article has been condensed from one which appeared in the Connecticut Journal of Industrial Safety. The hyline is the pseudonym of a member of the Connecticut Safety Society.

subject of this discussion, are those engaged in restrictive professional engineering such as fire insurance inspection, boiler inspection, elevator inspection, and other limited fields. They are not general practitioners of safety. Although they are engaged in the prevention of accidents they are not to be classified as industrial safety engineers. Nor do they compete with industrial safety engineers for they are the consultants to whom the industrial safety engineers turn for answers when stumped.

What's in a Title?

The matter of professional status does not worry established accident prevention men. Many of them with common garden variety titles such as Inspector or Safety Supervisor are drawing three times the pay of some with Safety Engineer on the frosted glass of their hide-outs. Too many safety engineers have cheered the professional status idea in the hope that by some legislative magic they might attain a prestige and security such as the medical profession has earned; sort of a free ride to a better-paying, unimpeachable position.

Actually, it is doubtful whether the diversified duties of industrial accident prevention men will ever make them eligible for truly professional status. The pressure for professional status comes too frequently from motives which have not helped to attain the objective.

In 1923 Mr. C. P. Tolman, a former president of the National Safety Council said, "Usually the Safety Engineer is required to make the plant as safe as possible with the following stipulations: he must not interrupt operations; he must do nothing which would decrease output or increase cost; he must not make changes of a character or in a manner to cause labor trouble; he must not make changes which would affect the character of the product—otherwise he has a free reign. . . ."

With few exceptions this is just -To page 132

Speeds Battery Changing

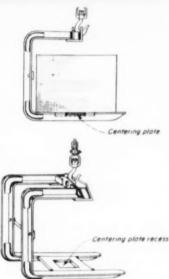


With the unique lifting device shown above, Grand Central Terminal changes baggage-carrier batteries in three minutes average time. The lifting yoke, engaged at the top by a hoist hook, lifts batteries into their compartments.

Line drawings at right show details of yoke-hook construction and how the battery rides on the hook. The centering plate recess is a hole in a strip of metal between the prongs of the hook. The centering plate, ettached to the bottom of the battery, fits into the recess, insures battery against being knocked from the yoke-hook.

An ingenious storage battery lifting device to effect quick battery changes in baggage trucks is reported by the field engineers of Gould-National Batteries, Inc., as used at New York City's Grand Central Terminal. In Grand Central more than 100 battery-powered trucks must be kept on the job 24 hours a day, seven days a week to handle mail, baggage and newspapers. Not more than 3 minutes per truck is allowed for changing the batteries.

The pick-up element of the lifting device is a large steel yoke-hook welded from simple structural shapes and carried by a monorail hoist. When removing a battery from its compartment in a baggage carrier, the bottom of the yoke-hook is slid into the



compartment under the battery. A rectangular centering plate (approximately 5x8x1 in.) on the bottom of the battery fits into a recess in the plate welded between the two arms of the yoke-hook, and acts as a safety device to prevent the battery from shifting position during handling. After positioning the rig, the battery is ifited slightly with the hoist, moved horizontally out of the compartment and transported on monorail to charging racks.



BY the time this issue reaches its readers, the preliminary program of the 41st National Safety Congress will already be in their hands. Safety departments have been planning meeting assignments for their delegations and those who are sole representatives of their companies are wondering how they can take in all the meetings they shouldn't miss.

With more than 200 meetings in one week and some three times that number of program participants, one person could hardly take in all the subjects of practical interest in his field.

Most of the programs stress the "how to" angles of accident prevention, occupational hygiene and medical service, fire protection, and the many phases of off-the-job safety, through demonstrations and panel discussions as well as prepared papers. There will be inspirational addresses, too,

Delegates will, of course, be interested primarily in the meetings of their sections. However, even a casual glance through the program will indicate that the interests of the various groups overlap. Mrs. Ivy Baker Priest, Treasurer of the United States and for many years an active officer of the Utah Safety Council, will be one of the speakers at the Annual Meeting Monday morning, October 19. At the Eighth Annual Federal Safety Conference Monday afternoon, Martin P. Durkin, Secretary of Labor will, be the keynote speaker.

Influencing people (and winning friends in the process) is one of the basic elements in safety promotion, whether on a plant, community or national scale. The Early Morning Sessions, which have been packing them into the Grand Ballroom of the Conrad Hilton for several years, have been helping safety people improve their techniques along this line, with public speaking and practical psychology as the principal themes,

This year the classes will be conducted at 8:30, Monday through Friday, by Dr. Paul J. Mundie, consulting psychologist Milwaukee, under the General title, "Per-

Looking north across Michigan Avenue Bridge. Left to right: Wrigley Bldg.; Shereton Hotel, where several Congress sessions will be held; Tribune Tower, and at extreme right, NSC Headquarters. The walkway along the south side of Tribune Tower leads from Michigan Avenue to second floor lobby.

sonal Effectiveness." Titles announced for the four lectures are: Developing Intellectual Effectiveness, Emotional Maturity. The Art of Handling Ourselves and Others, and Development of Insight and Motivation.

Those interested in industrial psychology will find numerous papers on the subject listed in the various meeting programs. At the Industrial Nursing Section, Dr. Gerald Gordon, psychiatrist with E. I. du Pont de Nemours & Co., will speak on "Safety as Viewed by the Psychiatrist," Dr. Gordon's article, "Industry's Problem Children," which appeared in the May National Safety News, has received widespread attention.

Of wide scope and timely importance are topics listed for subject sessions arranged by the

National Safety Congress and Exposition

American Society of Safety Engineers:

Basic Factors in Training-Today and Tomorrow.

Electronic Inspection and Testing of Equipment.

The Emphasis Is on People. Industrial Electrical Problems. Industrial Lighting and Seeing. Looking Ahead - Research in

New Approaches in Fire and Explosion Hazard Control.

New Problems in the Field of Accident Prevention.

Nuclear Energy as a Potential Industrial Problem.

Uniform Standards for Machinery Guarding and Protective Equipment.

The Safety Engineer's Relationship with Management.

Psychology in Safety. Wood Ladders and Planks.

Seven hotels will provide the meeting rooms for sessions: Conrad Hilton. Congress, Morrison, Hamilton, LaSalle, Blackstone and Palmer House, Registration and information desks will be located in these hotels. Following are the assignments for general and sectional meetings:

Conrad Hilton-Annual Meeting, Banquet, Early Morning Sessions, Air Transport, Chemical, Coal Mining, Electrical Equipment. Industrial Nursing. Metals. Mining. Petroleum. Printing and Publishing, Public Employee, Public Utilities, Pulp and Paper, Rubber, Wood Products, Home, ASSE Annual Meeting and ASSE Subject Sessions.

Congress-Automotive and Machine Shop, Glass and Ceramics, Meat Packing, Tanning and



HOTELS

- 15. Alexandria
- Allerton
- Atlantic
- Bismarck
- Brevoort
- Congress
- CONRAD HILTON 1.
- 17. Croydon
- 16. Devonshire
- Hamilton 6.
- Harrison
- 10. LaSalle Morrison 11.
- Palmer House

- **Planters**
- St. Clair 13.
- Sheraton IR.

RAILROAD STATIONS

- 19. Dearborn
- Grand Central
- Illinois Central
- LaSalle Street
- 22. North Western
- 24. Union

BUS TERMINALS

- 25. Greyhound
- 26. Trailways

Leather: Power Press, Textile, Traffic, Wood Products and ASSE Subject Sessions.

Morrison-Food, Marine, Railroad, School and College Divisional Sessions.

Hamilton-Aeronautical, Ce-

ment and Quarry, Construction, Fertilizer and Public Utilities.

LaSalle—Commercial Vehicle and Transit.

Blackstone Women's Activities. Palmer House Farm.

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Electroplating Made Safer

Equipment in new plant provides for fume removal and handling and disposal of corrosive substances

KEPING the workroom air free from contaminants and safe handling of corrosive materials were important considerations in the planning of the new electroplating plant recently placed in operation in Swissvale, Pa., by the Union Switch and Signal Division of Westinghouse Air Brake Company.

The \$640,000 plant introduces mass-production techniques to joblot electroplating, and features equipment for automatic and semiautomatic, barrel and still plating of a variety of metals. The new plant was planned to offer quantity production on small articles, lower costs due to increased production, controlled uniformity of plating and faster, more efficient service.

Metals to be plated in this new plant include nickel, copper, zinc, cadmium, tin, gold, silver, tinover-cadmium, tin-over-copper and nickel-over-copper-flash.

Equipment was installed on an assembly-line basis and conveyor systems speed transfer of items from each operation to the next.

Working and cleaning areas are covered with a floor of acid-proof brick, impervious to most chemical actions. The cement used in these floors is of varied composition, since nitrie, sulfuric and hydrochloric acids and alkalis used in cleaning treatments each have their own peculiar corrosive qualities. Floor trenches drain away overflow.

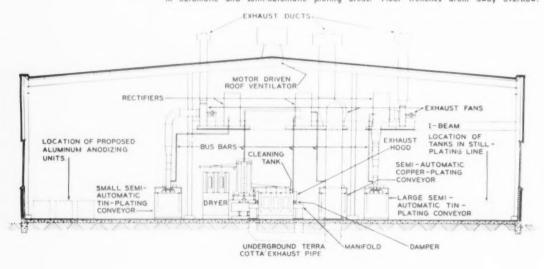
Ventilation and heating was designed to circulate, heat and replace a maximum of 300,000 cubic feet of air per minute. Heating fans prevent drafts and help maintain an even temperature, with ventilating fans removing half the air, and individual plating tank

exhausts taking care of the other half. Air louvres, with finned coil heating units, are located in two of the outer walls to heat replaced air.

Dual-controlled thermostats have been installed, to help heat the building proper, and to protect the coils from freezing during cold weather. The heating units function only during the winter. During the day, when in operation, they utilize exhaust steam from the forge shop's drop hammers. At night, they employ live steam supplied by the power house.

A water alkali solution is employed to wash down the air before exhausting and to neutralize the nitric oxide. Windows have been eliminated to aid the system in attaining peak operating efficiency. Doors are kept closed whenever possible.

Cross-section of Westinghouse Air Brake's electroplating plant. Diagram illustrates overhead rectifier locations, exhaust fans and ducts of down-draft exhaust system linked to tanks in automatic and semi-automatic plating areas. Floor trenches drain away overflow.



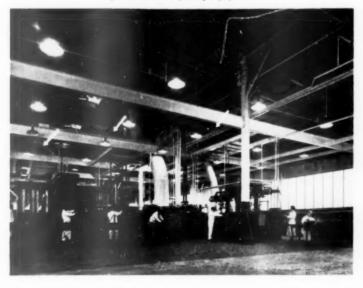


Electroplating equipment installed in new plant of Westinghouse Air Brake's Union Switch and Signal Division. In foreground are cleaning, storage and plating lines of barrel-plating area. Large machine in center background is fully automatic cadmium-plating conveyor. Machine is flanked by semi-automatic copper and tinplating conveyors. Fumes from tanks are drawn through floor by individual vents. Ducts are not completed for tanks in center row. Floors are of acid-proof brick and trenches covered with grating drain away overflow.

To conform with state and local sanitation and health rulings, provisions for personnel safety and efficient disposal were drawn into

the plans. Every tank is connected to a down-draft exhaust system, as required by Pennsylvania's pure streams act and the rulings of the

A well-planned system of fans and pipes provides efficient ventilation. Machine at right is fully automatic cadmium-plating conveyor; at right, fully automatic nickel-over-copper-plating conveyor. Arrows indicate overhead rectifiers supplying power to barrel-plating equipment.



Allegheny County Sanitary Authority.

Fumes are drawn down through the floor by individual vents and emptied into a network of underground terra cotta ducts. Because the ducts remain at a low temperature, moisture in the fumes is condensed and emptied into the sewer system. Air within the ducts flows counter to the condensed moisture and is led up through a system of fans to the outer atmosphere. Each underground duct is fitted with an individual trap to prevent any air from the sewer system from reentering the exhaust system.

According to Albert M. Wiggins, vice president and general manager of Union Switch & Signal, Westinghouse Air Brake will save enough in production and maintenance costs to pay for the total cost of plant and equipment in a few years.

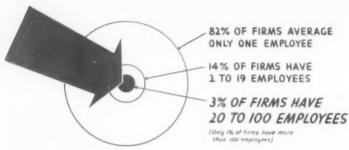
"Mr. Peepers" Featured in Child Safety Program

SAFE SUMMERTIME fun for school children is being promoted by Allis-Chalmers Manufacturing Company in cities where its plants are located, as one of its community relations activities.

"Mr. Peepers," who is Wally Cox, star of the Reynolds Metals Company TV show of that name, is featured in newspaper advertisements and large reprints which list rules to follow when riding bicycles, swimming, walking, and on the playground. A special message is given for high school drivers.

When the advertisement was made up it was shown to school officials in plant cities. They showed great interest and many requested reprints for distribution to all youngsters in the grades. In some instances, class periods were devoted to study and discussion of various safety rules and suggestions. Many schools placed reprints on classroom bulletin boards.

In addition, recreation departments have placed the reprint on playground bulletin boards. Firms with 20-100 employees can be reached with reasonable expenditure of effort through associations, local safety councils and insurance companies.



Target ...

Small Plant Accident Losses

By H. F. REINHARD

A report on the first two years of the National Safety Council's Small Business Program

THE Small Business and Associations Committee of the Industrial Conference of the National Safety Council was set up to advise the staff and to multiply their efforts in tackling the long standing problem of accident losses in smaller business. Our Committee has been fortunate in securing the enthusiastic support and guidance of insurance engineers, association executives, local safety council managers, professional safety engineers and small business executives. Their experience has been invaluable in developing our program.

Our Committee had no illusions as to the difficulty of reaching hundreds of thousands of small companies and, in some way, stimulating them to do something about reducing their accident losses. Our committee had been functioning for several years prior to the start of the Council's official

program in July of 1951, but it wasn't until a full-time staff man, Mr. A. M. Baltzer, was assigned to direct the program on a full-time basis that long-range plans could be carried out. It is a pleasure to report that the National Association of Mutual Casualty Companies, in July 1953, increased its grant from \$12,500 to \$23,700 which enables the Council to increase its staff and ensures a steady expansion of our program.

It's a Big Problem!

Progress has been made in defining the nature of the problem. Some groups talk about helping small business but their thinking is in terms of manufacturing plants employing less than 500 employees. Others talk about reaching the few clerks in the corner grocery store. All available statistics point to the fact that the smaller the company the higher its accident frequency rate-gencrally two to five times higher than that of companies with more than 500 employees. But little or no information is available on the very small companies with only a few employees.

Our objective then is to reach

the smallest companies possible without wasting our limited resources. In general, our goal is the independently owned 20-100 employee company, in both non-manufacturing and manufacturing fields.

The much-debated question "What is considered small business?" gives us little trouble. We are not bound by arbitrary definitions used by any other group and our help is available to any smaller company that has an accident problem.

Our Approach

It is literally impossible to reach directly more than a fraction of small business firms. We have been successful, however, in reaching quite a number of the exceutives of such firms through meetings of manufacturers' associations, local safety councils and businessmen's clubs. This activity helps the over-all problem by giving us more direct, first-hand experience in working with small business executives—experience that ultimately will be more valuable than the contribution to accident reduction in the comparatively few companies.

H. F. REINHARD is Manager of the Safety Codes Department, Union Carbide and Carbon Corporation; Secretary of the International Acetylene Association, New York City, and Chairman, Small Businesses and Associations Committee, National Safety Council.

FREQUENCY RATE



Association safety programs pay. Average reduction in frequency rates reported by 12 associations applying for the Council's Award was 46 per cent.

Our objective involves the use of "multipliers" — organizations which have the promotional and distributional facilities, such as publications and meetings, to reach small company owners or managers. Our appeal to these organizations is primarily based on their interest. We are stimulating the interest of associations, local safety councils, chambers of commerce and other groups by showing them the relationship between accident prevention and other services offered their members. To

do this our thinking had to be converted in part from terms of safety engineering into more understandable terms of public relations, employee relations, safety legislation, public liability losses and insurance costs.

News Publicity

Our approach during the past two years has been two-pronged; through publications and through service, with the promotional aspect stressed in both cases. In addition to the regular Small Business page, the NATIONAL SAFETY NEWS has carried a number of feature articles, thus stimulating interest among Council members and offering specific help. Reprints of articles from the NEWS and other publications have been used to good advantage.

News Letter

The Association's News Letter has been sent out several times a year to approximately 700 member and non-member associations to stimulate interest and to offer an exchange of useful ideas on safety activities. Reprints covering the Congress Sessions for associations and small business, together with other special releases, have also been sent out on a complimentary basis to the same mailing

Manuals

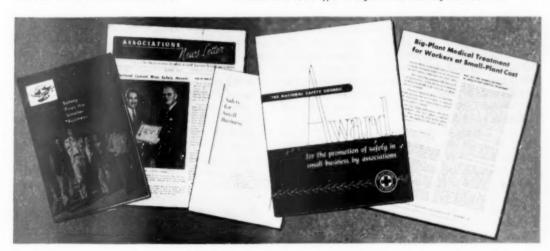
Our Small Business and Associations Committee cannot claim credit for the Council's 92-page Handbook of Accident Prevention, although the Handbook is helpful to medium sized companies and to small members desiring more technical information. A leaflet outlining steps to accident prevention in very small, independent companies is now being prepared for general distribution and it also will form the basis for special industry "manuals." Incidentally, several associations have availed themselves of the Council's advice in developing their own manuals; in fact, some manuals have been prepared jointly by the Council and the associations.

Membership

Our service has been offered without regard to membership, but it is gratifying to note that many small companies and associations have joined the Council. The Group Membership plan, whereby an association—one which is predominantly small business—can purchase Council materials and redistribute them, is proving quite helpful in industries which otherwise would not be reached in the foreseeable future.

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National Safety Council publications for small business and associations are released as the need develops. Largely promotional, they provide for an exchange of ideas useful to all types of organizations reaching small business.





Danger and Illusion

(Fiction)

By BILL ANDREWS

Tuesday, September 1, 1953

THE PROCESSES OF THOUGHT are weird and wonderful—at least mine are.

I knew that I should have been paying close attention at the staff meeting, absorbing the information and opinions being presented. But instead, I was day-dreaming, reliving the two weeks of wonderful vacation Sue and I had—two weeks with the kids safely packed away to Grandma.

I was thinking of our cabin on Clark Fork of the Yellowstone, and the cut-throat taking the fly up on Sunlight, and the sun dropping down behind Pilot Peak, and that bit of road that led us out of the mountains for the last time, dropping down into Red Lodge.

Then Macey, who is Larson's

new assistant and trouble shooter, dented my reverie with a remark about our safety program. I caught the end of his statement, "... and therefore I question the diffusion of effort which seems to put more emphasis on things like minor slips and strained backs and the care of small injuries in a plant where the number of operations involving the hazard of serious and even fatal accidents is very large."

And I found the eyes of the group focussed on me, as I tried to remove the crust of vacation memories from a mind gone slow and soft from days of sun and unclocked activities.

"I'm not quite sure I get your point," I said. "Are you arguing that we have underplayed our safety work on such things as presses and hoists, or that we are overplaying our hand on what you call the minor hazards—falls, handling material, and so on?"

Macey shook his head, "I'm not discussing the absolute amount of effort, but the relative. I'm not sure that absolutes can be arrived at in this field. But it does seem to me that if you are giving the right amount of attention to major hazards, then you are wasting your efforts by overplaying the minor ones in posters, meetings, and so on. On the other hand, if we assume that you are giving the right emphasis to the trivia. then I feel we are recklessly skimping the safety work on the problems which involve hazards of a deadly character.

So I battled to get my thinking back on the work track, and off the vacation track.

But my mind wouldn't come back. Instead it was thinking of a stretch of Montana road, a slow curve and bridge, with a highway junction to the right in the curve, just before you reach the bridge. And a tired state patrolman welcoming my offer to flag traffic with a flashlight, while he returned to the smashed car down the gully alongside the bridge.

And after the wrecker and ambulance had come and gone, Sue, I. and the trooper had coffee together, and he asked me if I had ever driven the Cooke City Highway. I had just come down that highway, driving high above the 10,000-foot level, winding down lunging switchbacks with 5,000 feet of empty space beyond the guard rails at the turns. I said it seemed a road of danger, one that would pay off driving mistakes with certain death.

The trooper grinned at me. "You know," he said, "that road opened in the middle 30's. Granted it's only open a few months a year, but it carries a whale of a lot of traffic. Mostly Sunday drivers—vacationists, easterners, old Aunt Suzie's and careless kids. It's strictly a resort country road, and that means darned few profes-

sionals drive it, except the busmen heading in from Red Lodge to the Northeast entrance of Yellowstone.

"I'll tell you a funny thing about that road. There has never been a fatality on it in the nearly 20 years in which it's been open. Not one. But this lousy curve herea nice, lazy curve, a wide open intersection, a wide bridge-that has killed four people since I've been on this district. The curve looks easier than it is, because that intersection gives an illusion of extra width. So you don't slow down for it, and you swing wide, and then, suddenly, you realize you'll have to tighten the turn at the last minute or hit the bridge. Then, if you're a little tight, or a nervous woman, or there's some slick on the road, you don't make it and you go off the bank and get killed, like that guy tonight.

"But you come down those switchbacks from Beartooth Pas. on the Cooke City Road, and what do you see—tremendous gulfs opening up, hairpin turns. As many times as I've driven it, it always makes me think of what would happen if I smashed through a guard rail and started rolling down the mountain. That road is its own danger signal—hollering blue murder, destruction and catastrophe at every driver.

"And because every driver feels that sense of danger, he prepares for it, and people don't get killed on it. But our curve here—did you ever see one that looks safer? We can plaster it from here to Christmas with warning signs, and the drivers, some of them, don't believe the signs, so they do get killed."

That review of my memories takes quite a bit of telling, but it flashed through my mind fast, and I found myself telling the story to the staff meeting, adding only these words of conclusion:

"It's the same way here in the plant. Put a guy on a big power press and he senses power and danger. What's more, his foreman senses the hazard, too, and gives him extra attention. And management—Macey, you weren't here when we started what we now know as our safety program. But management knew it had a wildcat on its hands in those presses. They were pretty well guarded before this plant had a safety man. No, when I got here the only press trouble they were having was on those little, fast punch presses with automatic feeds. They weren't killing anybody, but they sure were eating fingers; yet you'd say a ten-year-old could operate them safely. Ask Luther."

And old Luther, remembering the days when they called him "foreman of the butcher shop," nodded wrily at me.

"But if those punch presses looked safe, how about the stairs, and the parking lot, and the warehouse, and the job of lifting a carton up onto a pile? Or climbing a stepladder, or repairing a stationary machine? No hazard at all.

"Macey, I'm not trying to throw any rocks. Your job is to keep us on our toes, and look for the blind spots that we all have sometimes. But this is one time when we aren't blind. I can give it to you chapter and verse, in cold statistics. Year in and year out, the big trouble is with the little accidents, the fool little things you call trivia.

"In my nearly six years here, we've killed one man in a hoist accident. The only other fatal in the company was a little handpiling accident at an assembly plant. But we haven't had a single lost-time accident in four years on the big presses and not one in three years on the hoisting operations. But falls on stairs, infected cuts, backstrains from improper lifting, material dropped on toes; these have caused and still do cause the great bulk of our lost time from accidents.

"Believe me, I wish our accidents were just big, spectacular machinery pileups. I wish they were, because I can guard against them. I can engineer those accidents just about out of existence. But I'm not smart enough to engineer out of existence those blind



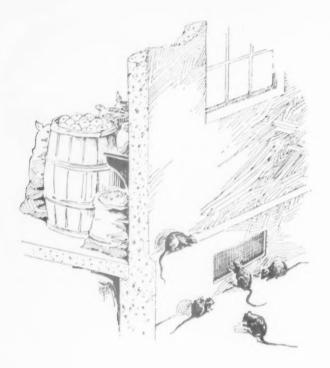






little human failings that you call trivia, but that kill and cripple our people more than the dramatic accidents do.

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Prolific Pests

By WILLIAM WALMSLEY

O NE PREGNANT RAT entering your building might have 1,500 descendants within a year, if nothing were done to eliminate her. The gestation period is only 21 days and the young rat is fully mature and ready to reproduce in 10 to 12 weeks.

In True Magazine Paul Collins stated that it would be theoretically possible for a three-year-old pair of rats to have 350 million living descendants. If no control measures were applied, the rat population could easily exceed the human population five to one within a few years. The human race

must fight bravely on in the struggle for existence.

For one rat scampering along the floor of your storeroom, there are 15 to 20 in hiding. This emphasizes the necessity of going after those rodents. Once you have completed ratproofing your establishment you may heave a sigh of relief and think, "Well, that's over for the next two years."

Don't kid yourself; it's not that easy! You must be on constant guard and keep the building in good repair. Rat proofing and insect proofing mean "building the pests out of a building." And after thorough proofing has been done, frequent inspection of the entire establishment is needed.

A twofold proofing may be completed at one time. When screening doors, windows, ventilators, etc., with hardware cloth against The astronomical fecundity of rodents and insects and their enormous appetites mean that the human race must wage a constant fight for survival. Details of their private lives will aid control measures.

entry of rodents, a fine wire screen cloth for insect proofing should also be used. Remember this dualtype screen construction is considered throughout this story otherwise, it may appear that I am overstressing rodent proofing, and neglecting the very essential need of insect proofing.

The first step in rodent and insect proofing is to thoroughly inspect the exterior of the building. checking the various items to be repaired and proofed. Should the roof be of flat top construction. and rooftype rats are known to be infesting the neighborhood, then it is imperative that the roof also be examined. If considerable proofing and precautionary measures appear to be necessary, it is advisable to make rough sketches covering each wall or exposure of the establishment. Broken windows, missing screens, imperfect masonry, or missing rat-guards, will help indicate needed repairs in a concise way. Without this informative sketch, a workman may easily overlook some minor but all-important item of repair. It is well to note that a small rat or mouse may squeeze through a one-half inch opening, so do not overlook small crevices.

Evidence of gnawings, either outside or inside, is an important indication of rat-infestation. According to research made by Shadle, of Buffalo, the average growth of a rat's incisor is five inches per year. If the incisors are allowed to grow to that great length the animal will be unable to eat and will starve to death.

WILLIAM WALMSLEY is Principal Emeritus, American Institute of Baking. This article has been adapted from a paper presented at a Sanitation Seminar conducted in Chicago, March 20, 1953, by Arwell, Inc., Waukegan,

Constant gnawing controls this growth and keeps the teeth in condition. Therefore, regardless of hunger, the rat will gnaw anything that will serve his purpose. It is interesting to see how he will clutch an object in his forepaws with the skill that a man holds a sandwich and then with lightning rapidity the incisors fly up and down like cutting chisels. He gnaws not only wood, but tin cans, garbage pails, metal pipes, even concrete posts or foundations. He is certainly not chewing concrete because he is hungry. He is doing his dental exercises.

What to Inspect

Some of the more important items to look for in the examination of the exterior of a building and immediate premises, are:

- 1. All possible avenues of entry.
- 2. Burrows and runs.
- Evidence of rodent tracks (feet, tail, droppings).
- Broken and unprotected windows.
 Non-proofed basement windows
- and doors.

 6. Gnawed thresholds of doors.
- Gnawed thresholds of doors, jambs, window sills.
- Amount of space under all doors.
 Holes in masonry, around pipes,
- Harborages under loading platforms, or any scattered debris.
- Possibility of travel up and along outside pipes, wires, conduits, drain-spouts, etc.
- Uncovered garbage, or rubbish on ground,
- 12. Pools of stagnant water.
- Condition of loading platforms and area underneath platform.
- Check fire escapes, overhanging branches of trees, ventilators, low mailboxes, and the space between buildings.
- Check low chimneys, downspouts, ledges, wires, and in the event the building has a penthouse, check its doors, windows, etc. (Nests of roof-rats have been found under loose flashings.)

When the manual work on the outside of the building is complete you will have the satisfaction of knowing pests have been "built out." Then it becomes the duty of all concerned with the establishment to continue keeping them out. Employee education is necessary.

Operation Philippines



More than 1,000 tons of farm tools, seeds, books and clothing have been collected by 105 Lions Clubs throughout California and Nevada for distribution to needy farmers in the Philippine Islands. Collection chairman of Operation Philippines Jack Block (left), Ralph Rhoads (third from left) and Frank Giomi, San Francisco Lions Club members, as they pack the goods for shipment by CARE, the non-profit, government-approved, overseas package agency. Assisting the Lions in their drive were the John Deere Company, the Oliver Corporation, International Harvester Company, and E. D. Bullard Company of San Francisco.

With the outside rodent and insect proofing under way, you are now ready to inspect the interior, starting in the basement and working up. Since the inside work may have to be done intermittently, the making of rough sketches of each floor, showing required work is recommended. This system is comparable to that suggested for the exterior of the building.

On your tour of inspection (be sure to have a good flashlight) do not overlook old equipment no longer in use—that old ice box in the basement. Since this has apparently been shelved and forgotten, you may be surprised to find it has become a choice piece of real estate for a thriving colony of rodents. Check along beams, pipes, wires, and the fire stops between walls.

Do not overlook drain covers. The sewer rat is an expert swimmer and he has been known to enter a building by way of a broken drain cover. Do not forget to look behind all old lockers. Maybe it has been three years since you have pulled those lockers away from the wall. If so, you are in for a surprise.

The actual work of rodent and insect proofing may be listed under three general classifications: labor, tools, and materials.

Labor. No special skill is required. The person assigned to do the work should be capable of using a general run of hand tools. The finished work of a good artisan will be strong and have a neat appearance.

Tools. Other than perhaps an improvised type of "bending-brake," no special tools are required. Those available in the maintenance shop will suffice.

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CHLORINE

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1. Chlorine, because of its extreme reactivity, is never found free in nature but always in combination with other substances. The most common of the compounds of chlorine is ordinary table salt. The element is usually manufactured commercially by the electrolytic dissociation of molten salt or brine.

2. Properties of chlorine:

| Atomic weight | 35.457 |
|----------------------|-------------|
| Molecular weight | 70.914 |
| Melting point | -100.98 ° C |
| | (-149.76°F) |
| Boiling point | -34.5° C |
| | (-30,1°F) |
| Critical temperature | 144°C |
| | (291.2°F) |
| Critical pressure | 76.1 |
| | Atmospheres |

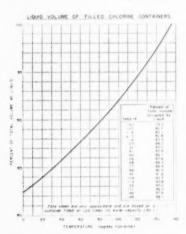


Figure 1. Liquid chlorine is about half again as heavy as water. One hundred and twenty-five pounds of liquid chlorine will fill a container large enough to hold 100 pounds of water 80 per cent full at zero degrees F.

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety Codes, federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

Latent heat of fusion 22.9

Cal/gm @ -101.5 ° C

41.2 Btu/lb @ -150.7 ° F

Latent heat of vaporization 688

Cal/gm @ -34.05 ° C

123.8 Btu/lb @ -29.3 ° F

3. The commercial grade of liquid chlorine is a clear, yellowbrown, free-flowing liquid about half again as heavy as water. It evaporates rapidly when exposed to the atmosphere. One volume of the liquid at 60°F produces 420 volumes of the gas at the same temperature. Liquid chlorine has an extremely high coefficient of compression. The density of the liquid decreases rapidly with increasing temperature and if the liquid is confined there will be a correspondingly large increase in hydrostatic pressure (Fig. 1),

 Containers of liquid chlorine are liable to rupture at high temperature, if they are filled too full and not allowed ample volume above the liquid surface to take care of the thermal expansion of the liquid. The LC.C. requires a vapor space above the liquid of about 12 to 15 per cent of the container volume.

5. Gaseous chlorine in high concentration is yellow-green. Its density when discharged into the atmosphere is about two and a half that of air so it tends to flow downward and collect in low spots (Fig. 2).

6. At room temperature liquid or gaseous anhydrous chlorine will not noticeably attack iron,

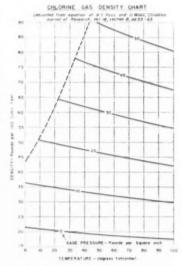


Figure 2. The solid black lines show density versus temperature curves at the indicated gas pressures. Thus at 55 degrees F. the density of chlorine under 30 pounds pressure will be 60 pounds per 100 cubic feet of air.

steel, or most other metals. Ordinarily the element is not flammable or explosive, but at high temperature it reacts vigorously with most metals. For this reason metal containers or conduits should not be heated. Further, there is the danger that the fusible plugs may melt if heat is applied to a chlorine container.

7. Moist chlorine, on the other hand, is extremely reactive and it will readily chew through most metal containers. It should be handled at low pressures in glass or crockery. Tantalum is inert to either dry or moist chlorine at temperatures below 302°F. Highsilica iron, monel metal and Hastelloy "C" also have a good resistance to moist chlorine.

8. Most of the reactions of chlorine liberate great quantities of heat and unless carefully controlled become violent.

Hazards

9. Chlorine is an extremely powerful vesicant and respiratory irritant. The liquid and high concentrations of the gas will cause severe burns and blisters to exposed skin areas. If taken into the lungs, it will destroy tissue and cause severe lung edema. The element is not a poison in the usual sense. It kills by burning tissue and by causing the lung spaces to fill with water. It has no cumula-



Figure 4. This ton container dolly permits the chlorine tank to be moved into position easily and removed rapidly in case of trouble. Rollers on the supports make it easy to rotate the container to position the valves for discharge. (Courtesy Eastman Kodak.)

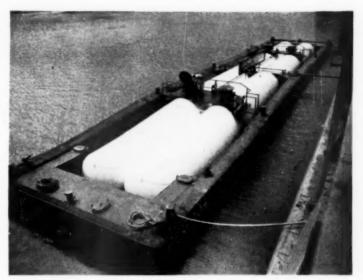


Figure 3. Where water transportation is available large shipments of chlorine are moved by barge.

tive effect; that is, it is not stored in the body until a fatal concentration is reached. Repeated exposure to small concentrations does not produce an immunity, but only damages successive small amounts of tissue which may or may not be regenerated.

10. The American Standard maximum allowable concentration for an eight-hour exposure is 1 part chlorine per 1 million parts air. The minimum detectable odor is about 3.5 ppm. In concentrations of this magnitude chlorine may cause trouble after a few hours of exposure. The following table will give some idea of the physiological response to various concentrations.

| Paper 248, "Gas Masks for Gases Met in Fighting Fires" | Chlorine Gas per Million Parts of Air |
|---|---|
| Minimum amount required produce slight sympton irritation after several h | is of |
| of exposure | 1.0 |
| Minimum detectable odor | 3.5 |
| Maximum amount that can breathed for one hour wit | |
| serious effects | 4.0 |
| Minimum amount required | l to |
| cause irritation of the thro | oat 15.1 |
| Minimum amount required | to |
| cause coughing | 30.2 |

U. S. Bureau of Mines Technical Parts of

| Amount | dange | rous | in | 30 | min- | |
|---------|--------|------|------|------|-------|-------|
| utes to | o one | hour | | | | 40-60 |
| Amount | likely | to b | e fi | atal | after | |
| a few | deep | brea | ths | | | 1000 |

Detection

11. There are several analytic schemes for determining the at-—To page 80

(General Precoutions)

Chlarine is heavier than air and will callect in fan spots. It will be carried by the wind. When a leak i discovered in a chlarine container, the fullipering are

- cedure should be followed immediately.

 1. Warn off people to move upwind of the leak and
- to stay out of the contaminated area.

 2 Notify your superior of the leak at once
- Remove anyone who has been aversame by chilarine livear a gas mask or an avergen supply respirator). Be sure that first aid is started at once.
- 4 If it in it your job to plug the look, stay out of the contaminated area. If it is, approach the leak only if you wan impervious clothing and axygen impaly respirator.
- 5 Turn the container to the leak is up and only gas excepts the valume of chloring from a gas leak is 1/15 that generated by a leak of liquid.
- If approved procedures do not stop the leek, disconnect the container and move it away from plant and personnel to where it can empty itself without creating a further hazard.

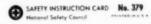


Figure 5. Instructions such as these shown on Safety Instruction Card No. 379 should be given to all men who work with chlorine equipment.



Room for Work-and Safety

LARGE, uncrowded work areas, facilities for straight-line production combined with extreme versatility, and ample room for expansion are conspicuous features of the plant of Link-Belt Company recently placed in operation at Colmar, Pa., 25 miles north of Philadelphia.

The plant, designed for the manufacture of materials-handling equipment, has a floor area of 300,000 square feet. Craneways in four of five 60-foot production bays with 32-foot clearances between trusses, extend under still higher transverse craneways in the receiving and shipping cross bays at either end.

Receiving and shipping bays are designed for efficient movement of truck and rail shipments. Reading Railway spurs run directly into the plant at each end. One of these sidings extends through the plant, permitting storage of heavy materials in the graded area at the rear of the manufacturing plant.

Railroad sidings are set flush with the floors, permitting trucks as well as trains to use this space. Concrete roadways extend into the plant. In addition, depressed truck docks are provided at each end of the building.

The layout, designed for an ultimate expansion to double the present manufacturing area, provides a plant with separate offices and toilet facilities, and an office building complete with all necessary facilities, including a cafeteria and medical dispensary.

Heating is provided by two oilfired burners located in a separate building adjacent to the manufacturing building. Perimeter heating for the manufacturing building is provided by a two-pipe high pressure steam system with thermostatically controlled unit heaters. Air handling units are located on platforms located within the truss space. For the office building, air handling units are located in the basement to provide ventilation with provision for future air conditioning.

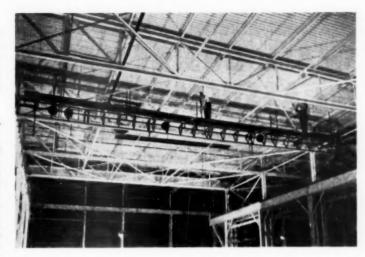
Lighting for the manufacturing

Four 750KVA substations are located on top of toilet rooms at strategic points. More than 3,000 feet of bus duct distributes power over a selective primary radial system in a simple secondary system. The wire mesh enclosure surrounds the maintenance shop. Throughout the shop, paint is used effectively to conserve light.



Uncrowded working space, excellent facilities for handling material on a straight-line production basis, ample parking space and room for expansion are features of the new Link-Belt plant at Colmar, Pa. Photos by The Austin Company, engineers and builders.

Installation of high bay incandescent lighting fixtures in more than a mile of 60-foot crane runways was simplified by use of a special bridge developed by Howard P. Foley Company, electrical subcontractors. A television tower section was mounted on two A-frames which were formed by welding channel iron legs together. A wheel was mounted on each leg so scaffold could be rolled along on crane rails. Cables were added for support and hand rails for safety.





Sewage treatment plant includes primary and secondary bio-filter tanks, shown in foreground, open settling tanks and enclosed sludge digester, beyond them, and chemical laboratory in background. One of five production bays. Open floor grille in foreground marks location of spray painting department. System of ducts and blowers at left provide down draft to draw paint through grille to curtain of water which will trap excess paint and keep plant free from fumes. New type of sealed beam reflector in 500, 750 and 1000 watt sizes mounted in pairs on 20-foot centers provide 30 to 45 footcandles. One of the air-handling units which provide mechanical ventilation and heating in central portion of plant can be seen in a platform in trusses (above, right). In addition to bridge cranes, jib cranes are installed on columns as required.

Lighting for the Manufacturing building is provided by 500, 750 and 1000 watt sealed beam reflector lamps located at the bottom of the truss work. Lighting for the office building is provided by fluorescent fixtures mounted flush with the suspended acoustic ceilings.

Paved parking areas have been provided for approximately 512 cars.

The project also includes a complete sewage treatment plant at the rear of the building site with primary and secondary settling tanks and bio-filters.



SMALL BUSINESSES and ASSOCIATIONS



By A. M. BALTZER all Business and Associations Program, NSC

Cooperation's the Answer

At the Southern Safety Conference, Harry J. Kirk, manager of the Department of Research and Safety for the Associated General Contractors urged safety training for employees and supervisors. He suggested that when this can't be done by the individual small contractor that small contractors pool their facilities and set up safety schools or clinics.

More groups find that cooperative action is the most convenient and effective way to help small companies reduce their accident total. Local groups and special industry groups are urged to set up safety training courses and to provide other facilities that the individual company could not otherwise afford to do.

Reprints Available

Quantities of special reprints on the subject of small business are now available.

Keeping Up With Small Business and Association Safety—a 22-page reprint of association and small business sessions at the Congress was extracted from volume 15 of the National Safety Council Transactions. If your association or small business group needs stimulation and factual information, here's the convenient way to give it to them.

Big Plant Medical Treatment For Workers At Small Plant Cost—this four-page reprint, which originally appeared in Factory Management and Maintenance Magazine has been re-run and is now available from the Council. It describes co-op medical services for two groups of small companies and conforms to the recommendations of the American Medical Association.

Single copies of either reprint are available at no charge from the Small Business Program, Industrial Department of the Council, For larger quantities use prices for "special releases" in Service Guide 2.1.

Scrap Iron, Not Safety

The Institute of Scrap Iron and Steel, Inc., an association member of the Council, reports in a recent bulletin that safety is paying off in their industry. A safety campaign conducted by the New York State Labor Department cut frequency rates 38 per cent during 1952.

Success of the campaign was due to voluntary compliance with practically all safety recommendations made by the state inspectors; most of the recommendations going beyond minimum standards established by safety codes and legislation.

The Institute also helped reduce the accident frequency rate in Maryland from 61 to 35 between 1950 and 1952—a reduction of more than 42 per cent. The Institute is now extending these campaigns to cover all 1.350 members in the industry.

State Campaign Gains

The 28th Annual Accident Prevention Campaign conducted by the Associated Industries of New York State, Inc., got results. 1243 firms with a total of almost 252,- 000,000 manhours of work rang up the lowest accident frequency rate to date. The 1952 record was 8.75—a 5 per cent reduction over the 1951 rate of 9.16.

At a series of 18 regional dinner meetings, ten special citation awards and 967 certificates were presented to units reporting accident-free participation during the 13-week campaign. Firms with almost perfect records and better than average records in each group and class were also recognized.

Safety Increases Profits

Mr. W. B. Adams, of the Adams and Tate Construction Company, Roanoke, Va., says in the *Con*structor Magazine, June 1953:

We have found that since we have had the safety program it has given us an added 1½-2 per cent on our volume, and in one sense of the word this is the least effort we know of to make this added profit.

In the past three years, this contractor saved \$28,000 in insurance by working to reduce accidents. Last January, 27 of the firm's superintendents and foremen enjoyed a ten-day vacation in Miami as a reward for their accident prevention effort. In spite of the extra effort and money put into the safety campaign, this firm found that it was an investment that repaid itself many times over.

Industry-Wide Reductions

The General Safety Committee of the Manufacturing Chemists' Association, Inc. reports a continuing progress. The industry's accident frequency rate dropped 15 per cent from 1951 to 1952 and the over-all reduction since 1946 was 46 per cent.

Experience by size of MCA member is shown below:

| Classification | No. of Firms | Frequency Rate |
|------------------|-----------------|-------------------|
| | 1952 | 1952 |
| Firms employing: | | |
| 250 men or less | . 18 | 27.55 |
| 250-1000 men | . 25 | 12.39 |
| 1000-5000 | 30 | 6.24 |
| 5000-over | 14 | 2.69 |
| Total | 97 // | Ven 14 10 |

Tool Room

PUTS FLOOR - CLEANING ON PRODUCTION BASIS

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- Saus Superintendent of Maintenance VICTOR ADDING MACHINE COMPANY, CHICAGO

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Completely Mechanizes Scrubbing

-applies the cleanser, scrubs, flushes if required, and damp-dries the floor - all in one operation! Job-fitted to specific needs, a Scrubber-Vac provides the maximum brush coverage consistent with the area and arrangement of the floors.

Model 213P, shown in illustrations at left, is designed for heavy duty scrubbing of large-area floors. It has a 26inch brush spread, and cleans up to 8,750 sq. ft. per hour! Finnell makes still larger sizes—in gosoline as well as electric models—and also sizes for smaller operations. From this complete line, you can choose the Scrubber -Vac that will put your floor-cleaning on a production basis and reduce labor costs. And you can lease or purchase the machine. Maintenance men like the convenience of working with a Scrubber-Vac. This all-in-one unit is self-propelled, and has a positive clutch. There are no switches to set for fast or slow-slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly.

In keeping with the Finnell policy of rendering an individualized service, Finnell maintains a nation-wide staff of floor specialists and engineers. There's a Finnell man near you to help solve your particular floor-maintenance problems . . . to train your operators in the proper use of Finnell Job-Fitted Equipment ... and to make periodic check-ups. It's also good to know that Finnell makes everything for floor care! For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 2209 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

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INDUSTRIAL HEALTH



Abstracts of current literature on Industrial Hygiene, Medicine, and Nursing

BY F. A. VAN ATTA Industrial Department, NSC

Research on Noise

The need for a center for coordinating data on noise (Historical background and the legal problem) by C. Richard Walmer. The 1953 Industrial Health Conference (April 22, 1953).

IT IS APPARENT that there is the possibility of a great deal of trouble over compensation claims for occupational loss of hearing. Doctors, asked suddenly to distinguish between occupational and non-occupational loss of hearing, and engineers, asked to measure and evaluate industrial noises, are aware of complexities and difficulties and of how much of the problem is yet to be accomplished. Management generally needs to be apprised of the consequences which will arise unless measures are taken to effectively and comprehensively study industrial noise.

Compensation claims amounting to more than \$5,000,000 have been filed against one company in New Jersey. Some forty odd cases have been filed in Wisconsin in two drop-forge plants. These claims are being made for loss of hearing. although no loss of earnings has been alleged. The Wisconsin cases are to be argued in the June term of Supreme Court. It is thought that there are from 25,000 to 100,000 potential cases in Wisconsin which are being held up pending the determination of this first test case.

In New York State with 6,000,000 workers, it is felt that there are approximately 600,000 potentially exposed to excessive noise. At \$2,000 each, the compulsory reserve fund, this could amount to more than \$1,000,000,000 in claims in the State of New York

alone. There is also nothing to prevent a later settlement for a further hearing loss in the same employment.

An attempt is being made to avoid this situation in Wisconsin by amending the compensation statutes so that hearing loss cases will be put on a wage-loss basis. This legislation has been agreed to by representatives of both labor and industry.

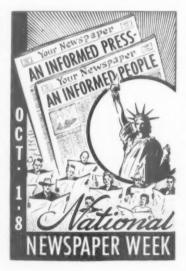
Since the beginning of the industrial revolution, noise has been accepted as a concomitant of industry. Results of this noise have always been present in the form of increased absenteeism, higher accident rates, lowered production and high labor turnover, but management has been rather unaware of the problem as the result of being more engrossed in other pressing problems. Quiet often it has been sacrificed to lowered costs or apparently less expensive production methods. This is now known to be false economy.

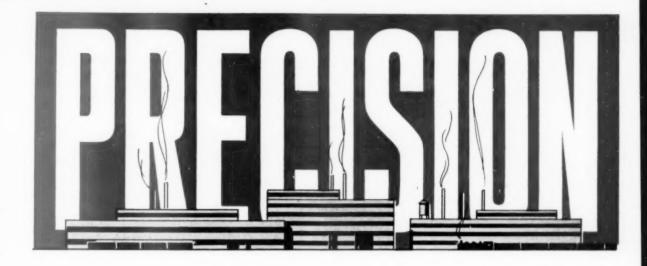
As a first step in studying the effects of noise on hearing, a standard procedure must be established for the measurement of hearing impairment and a standard method for the statement of hearing impairment. When this has been done, and done accurately, and when noise measuring devices have been standardized somewhat more. the relative effects of such things as intensity, frequency, duration and individual susceptibility can be evaluated and control measures can be provided when we know what types and intensities of noise have a deleterious effect upon hearing ability.

There is at present too much variability in the opinions of those who have studied the problem of the permissible noise levels. Codes based on the present standards would have a shaky and dangerous foundation.

In order to develop a prompt and comprehensive study of the problem of noise in industry with a minimum waste of time and money, a number of the interested groups have asked the Industrial Hygiene Foundation to participate as a coordinating agency. The Foundation has attempted and is now attempting to put together a broad comprehensive study of the effects of noise on hearing and of the control procedures which will reduce noise to acceptable levels when such acceptable levels are determined.

Noise research in this country started about 40 years ago and has had only cursory attention until —To page 117







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PRODUCTION

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THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

ACCIDENTAL DEATHS in May numbered approximately 7,900, an increase of 100 deaths over May, 1952. Deaths from public non-motor-vehicle accidents were more numerous than last year, while deaths from home and motor-vehicle accidents showed decreases. Fatalities from occupational accidents showed no change from May last year.

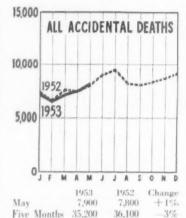
The total for five months was 35,200, a reduction of 3 per cent from 1952. There was a sizable decrease in deaths from home accidents and small decreases in fatalities resulting from occupational and public non-motorvehicle accidents. Motor-vehicle deaths showed an increase over the previous year.

Motor-Vehicle Deaths

The May total of motor-vehicle deaths was 3,090, a decrease of 2 per cent from May last year.

Deaths for the five months totaled 14,230, an increase of 4 per cent over 13,740 in 1952. The death rate per 100,000,000 vehicle miles was 6.6, a reduction of 1 per cent from the 1952 five-month rate of 6.7.

Of the 46 states reporting for five months, 17 had fewer deaths than in 1952, 2 had the same number and 27 had more deaths. Reporting cities with populations of more than 10,000 had a reduction of 1 per cent in May, but an in-



crease of 6 per cent for the fivemonth period.

Regional changes from 1952 in the five-month death totals were:

| North Atlantic | +7% |
|----------------|------|
| South Atlantic | +1% |
| North Central | +7% |
| South Central | -2% |
| Mountain | + 2% |
| Pacific | + 2% |

Occupational Accidents

Deaths from occupational accidents numbered approximately the same as in May last year-1,200. The total for five months was 5,600, a reduction of 100 from 1952.

The May frequency rate for plants in community council contests was 8.08, an increase of 5 per cent over last year. The May rate for plants in 17 sectional accident prevention contests conducted by the National Safety Council was 6.17, a reduction of 3 per cent from 1952. The five-month rate in community council contests was 7.28, a decrease of 12 per cent from last year, while in sectional contests the rate was 6.08, a reduction of 6 per cent.

Public Deaths

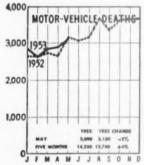
The death total for public nonmotor-vehicle accidents in May was approximately 1,600, an increase of 200 deaths from last vear.

Deaths during the five months numbered about 5,000, a reduction of 2 per cent from 1952. There was a sizable decrease in deaths from firearms accidents and a moderate reduction in fatal falls. Deaths from burns were more numerous while fatalities from transportation accidents and drownings showed little change from last year. Increases were recorded for children 5 to 14 vears of age and young people 15 to 24 years old. Other age groups had decreases from last year.

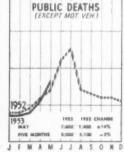
Home Deaths

May deaths from home accidents totaled 2.200, a reduction of 4 per cent from May, 1952.

The five-month death total was 11,300, a decrease of 9 per cent from last year. There were moderate reductions in deaths from poisonings and mechanical suffocation and small decreases in deaths from burns, firearms accidents and falls. All age groups showed some reduction from last year.









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- · And contour-fitted side shields . .

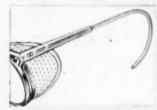
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Books, Pamphlets and Periodicals of Interest to Safety Men

BOOKS AND PAMPHLETS

The Menace of Fire

Disaster on Your Doorstep, By Paul W. Kearney. Published by Harper & Brothers, New York, 1953. 210 p. \$3.00.

A vivid picture of the general problems of fire control is given in this book. It discusses many of the disasters that have been caused by fire, and of the possible disasters that could occur if proper steps are not taken to prevent them.

The sections on schools, hospitals, forests and ships are of particular interest and deal with the general problems of fire safety, by reviewing past disasters in these occupancies.

The reader is urged to investigate conditions in his own community. More detailed study of the problem, and courses of action by the individual, are suggested. F. G. Pater

Accident Statistics

Injury Rate Variations in the Boilershop — Products Industry, 1951. Published by U. S. Bureau of Labor Statistics, Washington 25, D. C. 1953. 15p. (BLS Report No. 28),

Fire Protection

Disaster on Your Doorstep. By Paul W. Kearney. Published by Harper & Brothers. New York, 1953, 210p. \$3,00.

Fire Prevention Code. Revised 1953. Published National Board of Fire Underwriters. 85 John Street, New York 38, N. Y. 189p. Free.

Maintenance

Techniques of Plant Maintenance and Engineering. Proceedings of the Technical Sessions (sponsored by the American Society of Mechanical Engineers and the Society for the Advancement of Management) held concurrently with the Fourth Plant Maintenance Show. Published by Clapp and Poliak, New York, 1953, 288p. \$6.00.

Metal Products Industry

High Level of Auto Plant Safety Reached by Planning and Vigilance. Automobile Facts. June, 1953.

Mines

Safety in Coal Mines. Published by Internation Labour Office, Geneva. 1953. 266p. Available from Washington Branch 1262. New Hampshire Ave., Washington 6, D. C. \$1.50.

Static Electricity

Static Electricity in Hospital Operating Suites. By P. G. Guest and others. Published by U. S. Bureau of Mines. 1953. 58p. For sale by the Superintendent of Documents, Washington 25, D. C. 40c. (Bulletin 520—Bureau of Mines.)

MAGAZINE ARTICLES

Aeronautics

A. F. Research Cuts Crash Rate, By Alexander McSurely, Aviation Week, June 29, 1953, p.21.

Air Pollution

A Critical Examination of Air Sampling Instrumentation, Methods. By William T. Ingram and Lawrence F. Dieringer. Industrial Hygiene Quarterly, June, 1953. p.21.

Fly Ash Collection in Industrial Experience. By B. S. Norling. Industrial Hygiene Quarterly. June, 1953, p.103.

Chemicals

Arsenic Trioxide Exposure in Industry, By Sherman S. Pinto and Charles M. McGill. Industrial Medicine and Surgery. July, 1953, p.281.

Construction

Safety: Job for the Construction Superintendent. By J. B. Kovach, Engineering News-Record. July 9, 1953. p.39.

Safety in Demolition — Industrial Bulletin, New York State Department of Labor, July, 1953, p.3.

Dusts

Acute Toxicity of Mineral Dusts. By Jean C. Dale and E. J. King. A.M.A. Archives of Industrial Hygiene and Occupational Medicine. June, 1953, p.478,

Engineers — Safety

Your Safety Man Should Teach Maintenance, Too. By L. E. Kasselbaum. Fleet Owner. July, 1953. p.86.

Environment

Controls of the Environment in the Prevention of Industrial Accidents. By Bryan H. Harvey, A.M.A. Archives of Industrial Hygiene and Occupational Medicine, June, 1953. p.529.

Foundries

Foundries Can Be Safe. American Foundryman. July, 1953, p.57.

Hotels

First Aid Instruction Is The First Step to Safety. By R. P. Whitney, Hotel Monthly. July, 1953, p.58.

Job Analysis

Job Safety Analysis. By R. C. Kean. American Mutual Magazine — Loss Control. May, 1953, p.13.

-To page 48

LOOKING FOR SAFETY FOOTWEAR WORKERS ENJOY WEARING?

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Safety Library From page 46

Lightning

This Is the Way to Protect Against Lightning. By James W. Ward. Textile World. July, 1953. p.98.

Metal Products Industry

Injury — Rute Variations in the Boilershop — Products Industry. Monthly Labor Review. June, 1953, p.621.

Mines

Tops in Mine Safety—How Did They Do It? By J. H. Edwards, Coal Age. July, 1953. p.100.

Ventilation and Exhaust Systems

Contaminant Characteristics Encountered in Local Exhaust Systems. By James R. Kayse. Industrial Hygiene Quarterly. June, 1953. p.133.

Workmen's Compensation

Workmen's Compensation in the United States III. Federal Legislation. By John Petska. Monthly Labor Review. June, 1953, p.602.

Plan Symposium on Outdoor Noise

OUTDOOR NOISE will be the topic for the Fourth National Noise Abatement Symposium to be held October 23 and 24, in Chicago.

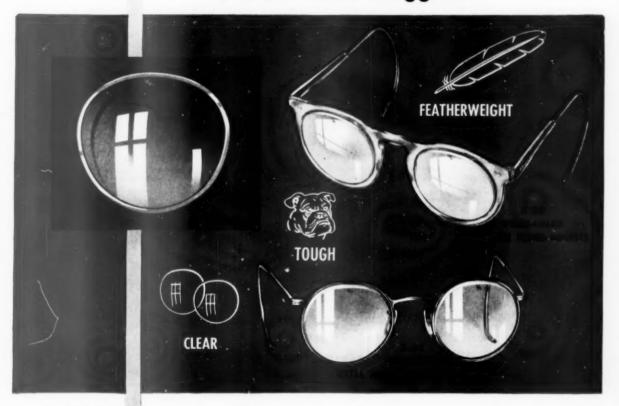
Purpose of the symposium will be to disseminate information on outdoor noise. It will be the largest meeting ever held concerning this subject.

Papers on traffic, vehicle, and other city noises and on urban and industrial planning for less noise are being considered for presentation. Recent information on industrial noise also is being considered.

Co-sponsors of the symposium are: National Noise Abatement council, Acoustical Materials association, Acoustical Society of America, American Industrial Hygiene association, American Society of Safety Engineers, American Institute of Architects, Council on Industrial Health of the American Medical association, American Society of Planning Officials, and Armour Research Foundation of Illinois Institute of Technology.

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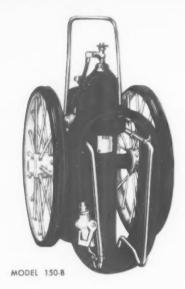
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the fire. They can be actuated faster. They'll put out more fire faster. They're easier to recharge and maintain. And they will give even more years of trouble-free service.



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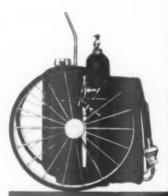


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COMING **EVENTS**



Sept. 15-17, Cleveland, Ohio

Fifteenth Annual Ohio State Safety Conference and Exhibit. (Hotel Carter). Carl L. Smith, executive secretary, 2073 East Ninth St., Cleveland 15, Ohio.

Sept. 16-17, Harrisburg, Pa.

Annual Conference, Department of Labor and Industry. (Penn Harris Hotel). David M. Walker, secretary; General Chairman, Frank K. Boal, deputy secretary, Room 304, South Office Bldg., Harrisburg, Pa.

Sept. 17-18, York Harbor, Me.

Twenty-sixth Annual Maine State Safety Conference (Marshall House). A. F. Minchin, secretary, Industrial Safety Division, Department of Labor and Industry, Augusta, Me.

Oct. 19-23, Chicago

Forty-first National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Nov. 17-18, Cincinnati, Ohio

Third Annual Greater Cincinnati Safety Conference (Sheraton-Gibson Hotel). Kenneth R. Miller, executive director, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Building, Cincinnati 2, Ohio.

Nov. 19, Fort Worth, Tex.

Ninth Annual Industrial Institute, sponsored by Fort Worth Safety Council and Fort Worth Chapter, ASSE. (Hotel Texas). L. W. Graff, safety director, Fort Worth Safety Council, Majestic Bldg., Fort Worth 2, Tex.

Dec. 4, Oakland, Calif.

Annual Eastbay Area Traffic Safety Conference. C. W. Dreyer, Green Cross, 353 15th St., Oakland, Calif.

Dec. 7-8, New Orleans, La.

Louisiana Safety Conference (Roosevelt Hotel). Charles E. Doerler, conference secretary. Address c/o Caddo Bossier Safety Council, Inc., 610 Ed wards St., Box 806, Shreveport, La.

Feb. 10, Dayton, Ohio Second Annual Miami Valley Safety Conference. (Biltmore Hotel). Marvin Purk, manager, Safety Council, Dayton Chamber of Commerce, Biltmore Hotel, Dayton 2, Ohio.

Next page



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Mar. 7-9, Louisville, Ky.

Southern Safety Conference and Exposition. (Kentucky Hotel). W. L. Groth, executive director, P.O. Box 8927, Richmond 25, Va.

March 10-11, Philadelphia, Pa.

Twentieth Annual Philadelphia Re-gional Safety and Fire Conference and Exhibit (Bellevue-Stratford Hotel). Walter W. Matthews, managing director, Philadelphia Chamber of Commerce Safety Council, Architects Building, 17th and Sansom Sts., Philadelphia, 3.

Mar. 17-18, Indianapolis, Ind.

Central Indiana Safety Conference and Exhibit. (Claypool Hotel). Jack E. Gunnell, director, Indianapolis Safety Council, 320 N. Meridian St., Indianapolis 11, Ind.

Mar. 30-Apr. I, Pittsburgh, Pa.

Twenty-ninth Annual Western Pennsylvania Safety Engineering Conference and Exhibit. (Hotel William Penn). Harry H. Brainerd, executive manager, Western Pennsylvania Safety Council, 605 Park Bldg., Pittsburgh 22, Pa.

Apr. 6-9, New York

Twenty-fourth Annual Greater New York Safety Conference and Exposition. (Statler Hotel). Paul F. Stricker. executive vice-president, Greater New York Safety Council, 60 East 42nd St., New York 17.

April 14-16, Charleston, W. Va. Twentieth Annual West Virginia Statewide Safety Conference. Charles Hopkins, managing director, West Virginia Safety Council, Inc., 316-17 Masonic Building, Charleston 1, W. Va.

Apr. 20-22, Detroit, Mich.

Michigan Safety Conference. (Sheraton-Cadillac Hotel). Jerry E. Moore, executive secretary, c/o Corporate Service Inc., 2210 Park Ave., Detroit 1,

May 4-6, Raleigh, N. C.

Twenty-Fourth Annual North Carolina Statewide Industrial Safety Conference (Sir Walter Hotel), H. S. Baucom, safety director, North Carolina Industrial Commission, Raleigh.

Fire Alarm Made to Last 1,000 Years

A British firm has come up with a fire detector which consists of small cells, with an element small enough to be held in the palm of the hand. Each cell contains a radioactive element which sensitizes the cell interior so the least trace of smoke triggers an electrical circuit and sounds the fire alarm in the control panel.

The element is claimed to have a guaranteed life of 1,000 years, with each cell protecting from 20 to 50 yards of floor space.









How to put SAFETY on every worker's lips

You can't repeat your safety messages too often. And a good way to get in several extra licks a day is to use Continental's Safety Slogan hot drink cups. Each attractive cup delivers two practical safety messages that are brief, right to the point, and not a bit preachy. And these messages reach your worker at snack or meal times when he is relaxed and friendly.

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Safety engineers from many plants where Safety Slogan cups are regularly used tell us these little messages from "Oscar the Life-Guard" are particularly acceptable to workers.

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ACCO Registered Wire Rope Slings He Was Prepared, But Snake Didn't Bite



Sergeent Joseph Tomko demonstrates use of snake bite kit which, fortunately, he didn't need when he found a rattler in his duffle bag. (Photo by Medical Supply Co.)

When a person puts the bite on you, it usually means you are out just a little money. However, when a snake is involved, it could cost you your life.

Sergeant Joseph D. Tomko, of the Florida National Guard recently had a narrow escape from a rattlesnake which had set up housekeeping in his duffle bag.

Sergeant Tomko had this harrowing experience when his division arrived at a new installation.
All baggage had been piled together, and each man found his
own duffle bag and proceeded to
unpack the equipment. When
Tomko reached into his bag, to
unpack, he felt a squirming object. Realizing that entrenching
shovels don't squirm, he quickly
withdrew a discreet distance,
where he could reconnoiter the
situation.

From this vantage point he watched a three and a half foot rattlesnake slither out of the bag. The reason Sgt. Tomko had escaped the wrath of the rattler was; at the time, said snake was too busy swallowing a small garter snake.

Although good fortune saved him from the snake's fangs, Sergeant Tomko was equipped, as is every man in his division, with snakebite first-aid equipment. A medical supply company, manufacturing snake bite kits recommends the following rules for anyone in an area thought to contain snakes.

 Never enter snake infested territory without snake bite first aid equipment.

2. Practice with and understand your equipment at the start of each season. 3. Don't stop, sit, or put your hands

where you cannot see.

4. Wear protective boots and clothing capable of deflecting a snake's strike.

Avoid places snakes frequent, such as ledges and crevices.

6. If you come upon a snake suddenly, stand perfectly still. It is said snakes will get out of your way if they can, but they will strike defensively, in fear, at anything that moves.

7. Be extremely cautious in early spring or during snake mating season. During these periods the snake discards his "strike only in defense" policy and will strike at anything he sees.

Workers Reached in Their Own Language

In an effort to overcome the language barrier, International Harvester Company's Tractor Works has utilized a native language version of the National Safety Council sound film, Learn and Live, shown to recently immigrated Polish workers.

Through NSC headquarters, the company got in touch with Dr. Walter Sikora, Chicago radio station executive, who arranged production of the script and narration. The narration was spoken by an announcer popular among the Polish population of Chicago.

Although the film was not intended to evoke laughter, that is what happened at one showing. Sound for the film is provided by a record, synchronized with the picture. The operator inadvertently set the record at 78 rpm rather than the required 33 rpm. Since he couldn't understand the narration anyway, he was quite at a loss when the audience broke into hearty laughter, rather than the expected studious interest.

Despite this one incident the film has been well received, and an official of International reports that distribution of the film, to other industries with a similar problem, is now under consideration.



How You Can Speed Up Handling of Castings

• Castings frequently are odd shaped and hard to hitch to with regular sling hooks. So AMERICAN developed the series 500 ACCO Foundry Hook with rounded point and wide mouth that can be hooked to a wide variety of lifts.

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ACCO Foundry Hooks are safer than home-made hooks. And they're cheaper because you save the cost of fabricating and assembling to the chain in your plant. The completed unit bears the well-known ACCO Registered identification ring—your assurance of highest sling chain quality.

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rk, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.



GREEN CROSS NEWS



Managers' Meeting

Chapter and safety council managers and state administrators will hold their annual two-day Managers' Meeting on Friday and Saturday, October 16 and 17, at the Conrad Hilton, Chicago. A progress exhibit will be featured, portraying the special activities conducted by councils and chapters. Community safety progress in all fields will be emphasized through talks, panels, visual aids, group discussions and audience participation.

In addition to the discussions conducted by leading council and chapter managers, there will be several nationally recognized speakers, experts in their respective fields.

Advance confirmations indicate that more than 100 managers are planning to attend the sessions which are held just ahead of the Annual Safety Congress. Special Achievement Awards for the contest year 1952-53 will be presented at the Managers' luncheon on Friday, October 16. A reception for the managers and their guests will be held Saturday evening. October 17.

All safety council administrators, state and local level are most cordially invited to attend. Further, if any Council president or any of the members of the board of directors would like to sit in on these sessions, they will be most welcome.

San Luis Obispo Plans

Plans are currently underway for the organization of a local safety council in San Luis Obispo, Calif. A preliminary organizational meeting was held recently, attended by 75 civic leaders, including public officials. The organization is planned as a division of the local chamber of commerce. Luke Trahin, manager of the Chamber, has been the spearhead of the movement. It is hoped that eventually the Council will conduct a county-wide operation but the initial organization will cover only the San Luis Obispo area.

Seattle Gives Impact to Safety

The Seattle-King County Safety Council has developed a new and unusual means of calling attention to traffic safety. Whenever a 24-hour period is passed that is free of traffic deaths, a large bomb with a parachute flare attachment is fired, just at dusk. The shooting takes place where it can be observed by approximately two thirds of Seattle's population. The Seattle Fire Department does the actual firing of the rocket, in the Bay off of Seattle, thus making the stunt completely safe as well as unusual and eve-catching. The bomb goes off at 500 feet; the rocket flares at 1000 feet.

Accidents Among the Aged

Recently the County of Los Angeles, in cooperation with the Los Angeles Chapter, NSC, and numerous civic organizations, published and distributed a 41-page booklet dealing exclusively with accidents to the aged. This oftneglected phase of accident prevention is completely covered in this concise, well written booklet. Such topics as industrial accidents among the aged; physical and psychological aspects of accidents to the aged are thoroughly discussed.

Timely statistics are also included. This is one of the few booklets available on the subject. It is intelligently written and the problem is clearly defined.

Publishes Film Catalog

Eastbay Chapter, NSC, in cooperation with the Alameda County Board of Supervisors, has prepared and distributed a safety film directory which lists the sources and titles of all safety films, both 16mm sound motion and 35mm soundslide, available in the Bay area. The films are listed in such categories as civil defense, fire, home, industrial, public safety, etc. Copies may be obtained direct from the Eastbay Chapter, Oakland, Calif.

Idaho Has New Manager

The executive committee of the Idaho Chapter, NSC, has announced the selection of Robert Hankey as manager of the Council, effective July 1. Mr. Hankey is making a swing through the state in order to find ways and means of further promoting the council and expanding its work. The Idaho Chapter also plans on relocating its offices later this Summer.

Tennessee Asks for Help!

During its recent fund raising campaign, the Tennessee Safety Council distributed a small three-color leaflet that packed a punch in its appeal for funds. The leaflet pictured a man who had literally painted his way into a corner. The words "We Need Help" were painted in black and red in the center of the page.

-To page 138

STONEHOUSE SIGNS FOR ACCIDENT











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On the great ships that sail the seven seas...on docks, around harbors . . . the activities of world commerce create many hazardous conditions for workers.

One of them is the "Falling Hazard"... the falling of heavy objects, always a possibility where huge cranes load and unload cargoes.

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Council Announces Safety Training Courses

Two "Fundamentals of Industrial Safety" courses will be held during November and December by National Safety Council's Safety Training Institute. "Fundamentals" is an intensive one-week training course designed principally for safety men, and industrial relations and personnel men who are interested in safety.

The November course has been filled to capacity enrollment for several months, but applications are being accepted for the course to be held December 7-11. Information and applications for enrollment can be obtained by writing to: Registrar, Safety Training Institute, Industrial Department, National Safety Council, 425 North Michigan Ave., Chicago 11.

THE READERS' POINT OF VIEW



Comments on topics of current interest are invited. They need not agree with the editors' opinions.

Cases for Comment

KALAMAZOO, MICH.—I have read "Cases for Comment" with keen interest. It is excellent and much needed by safety men everywhere. Borderline cases frequently occur in which the conscientious safety engineer must make a decision as to whether it is occupational. These reviews will be a refresher to the experienced safety man and a real education to the newer man.

If everyone would "buy" the decisions in "Cases for Comment," accident statistics would probably become more realistic than they now are. The summaries provide a uniform understanding of the philosophy and reasoning behind each decision.

I hope "Cases for Comment" continues indefinitely, even if some are repeated for the benefit of the passing parade of new safety men.

> J. A. Stone, Safety Engineer The Upjohn Company

Inspiration

WILMINGTON, N. C.—It afforded me great pleasure reading "I Will Lift Up Mine Eyes." reproduced on page 35 of the July issue. It is a beautiful sentiment and should appeal to all those who read it. Robert Scott, Director

Department of Safety and Insurance Atlantic Coast Line Railroad Company

BEATRICE, NEB.—I have just read "I Will Lift Up Mine Eyes" and it has given me a lift. It is truly a gem. I have made several copies and passed them along to my friends and I mean to make enough copies to supply all our bulletin boards.

We all need a boost now and then; such a one as this is really a thought provoker, encouraging appreciation and gratitude for the good things.

MRS. JOHANNA SMITH, R.N. Dempster Mill Manufacturing Company

Recruit Smoky Stover To Put Fire Safety Over

Noted fireman Smoky Stover of Lisle Hose Company No. 1 will work an overtime shift this year. In addition to his regular duties, Bill Holman's comic strip firefighter will take on the job of carrying a fire prevention message to families all over North America.

Fireman Stover will be busiest during Fire Prevention Week (October 4-10) when fire departments, industry, trade and civic groups in the U. S. and Canada will distribute his fire prevention comic book in their respective communities.

The fire safety advice fireman Stover ladles out in his new book treats such fire hazards as smoking in bed, bad electrical habits and oily rags in a switch from the usual 'scare' approach.

The new comic book is published by the National Fire Protection Association of Boston in cooperation with Smokey's creator, Bill Holman, and the Chicago Tribune-New York News Syndicate. Feature Publications, Inc. of New York prepared the book for the NEPA.

The NFPA will make quantity distribution of the book only. The back cover has been left blank for the local sponsor's imprint.



A Materials-Handling Show Goes on the Road



Tent and trailer house Yale & Towne's materials handling show while on the road. Itinerary includes the leading cities of North America.

handling manufacturer is going to potential clients. The Yale & Towne Manufacturing Company is sponsoring a two-year, 25,000-mile transcontinental tour of a demonstration unit which features their equipment.

The caravan is now on the sec-

AS MOHAMMED went to the ond leg of its journey, which be-mountain, so a materials- gan in Miami early this year. Present plans call for crossing the United States twice, with visits to Canada and Mexico. The purpose of this traveling exhibit is to promote materials-handling equipment through circus methods.

> Seven men are needed to put on the show - seven men and two

specially constructed trailer rigs pulled by an International tractor and a Dodge. In addition to the materials-handling equipment, music and movie equipment, 100 lightweight arm chairs for spectators, generators, battery chargers, promotional material and the bulky pavilion tent must all be loaded before the show can go on to the next town.

In each city the local Yale & Towne distributor cooperates in putting on the show and serves as host to the audience. In his own area he may demonstrate additional pieces of equipment which may be of particular interest to his customer. He will also add any specialized lifting, carrying or stacking applications which he may desire.

At each stop when the tent is up and the equipment out of the 33 foot steel-reinforced aluminum Fruehauf trailers, steps are put in place leading up to the big side

Easy chairs, birch-paneled walls, sound conditioned ceilings lend a club-like atmosphere. Around the walls are poster-size photographs of equipment. A moving picture showing materialshandling equipment in industry applications runs continuously in one of the trailers. Light refreshments are served.

Even a girl can toss a ton around. Sally Sullivan backs a lift truck up a specially designed ramp into a trailer in the Yale & Towne materials-handling road show, now touring the continent.

Interior of one trailer of the materials-handling road show. Here movies of equipment in use in plants in many types of industries are presented. Walls are birch paneled with acoustical ceilings.







O'SULLIYANS AT HOME. Clarence M. O'Sullivan, construction foreman with 34 years' experience; daughter-in-law Marilyn, clerical assistant for 5 years, and Mr. O'Sullivan's sons: Don, an installer with 7 years' service, and Clarence C., cable repairman with 13 years' service.

Fifty-nine Years of Telephone Service

FATHER, TWO SONS AND DAUGHTER-IN-LAW ALL WORK FOR THE TELEPHONE COMPANY



TELEPHONE MAN OF 1970. Clarence C. O'Sullivan's young son, Mike, likes to pretend he's a "telephone man." And he will be when he grows up, if he follows in his family's footsteps.

When Clarence M. O'Sullivan started to work for the telephone company, back in 1919, he started a family tradition. Since then two sons and a daughter-in-law have also decided on telephone careers. They have a total of fifty-nine years' service.

A recent U. S. Government survey gives some interesting figures on the length of time men and women have served with their present employers.

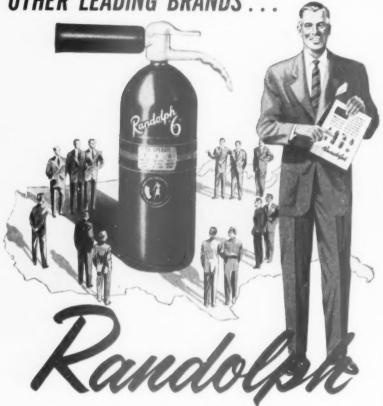
By comparison, the length of service for women in the Bell System is twice the average for women in other industries. For telephone men it is nearly three times the average for other industries.

This longer length of service, which indicates job satisfaction, also has a value to the telephone user. It helps us give better service to everyone.

Bell Telephone System



HERE'S THE EXTINGUISHER YOU PICKED AS "EASIEST TO USE" OVER THREE OTHER LEADING BRANDS...



Safety and Plant Engineers—here's how you voted: In a national survey recently completed, 100% of your replies stressed ease of operation as a major factor in Extinguisher selection. And on the basis of being "easiest to use", 86% of your replies specified Randolph over the nearest brand—66% specified Randolph over three other leading brands, combined!

With no nozzles to adjust, no valves to turn, Randolph Extinguishers are 100% panic-proof. Just snap from the bracket, aim and press the trigger. You KNOW how to use this extinguisher just by looking at it!

COMPLETE LINE OF EXTINGUISHERS AND AUTOMATIC EXTINGUISHING SYSTEMS

Make sure your plant is mobilized for fire . . . with easy to use, simplified RANDOLPH Equipment. Sizes from 2½ to 50 lbs. Manual and automatic systems. Write Randolph Laboratories, Inc., 2 E. Kinzie St., Chicago 11, Illinois.



Urge "Autogyms" for Safe Driver Training

PHIL WALTERS, one of America's top sports car racing drivers proposes the establishment of community "autogyms" throughout the nation to promote skilled driver training and cut down the death toll from road accidents.

In the September issue of Cars, national automotive magazine, Walters writes that many motorists mistake driving mileage for driving experience. Some day they'll need a skill they haven't got and 200,000 miles at the wheel won't save them.

The auto-gym is designed to give motorists every phase of driver experience with helpful supervision from experts. In England there is such a gym in use at the Metropolitan Police Driver School at Hendon near London.

The proposed auto-gym will provide no high-speed courses, but there will be provision for cornering tests and other performance competitions.

Offer Safety Course For Hotel Personnel

New York University's Center for Safety Education, in cooperation with the Hotel Association of New York City, will offer a new course in accident prevention during the fall term for managers and other hotel personnel.

Edwin F. Ahern, director of training and safety for the Hotel Taft, New York City, will be instructor for the 15-week course, to meet from 3 to 5 p.m. on Thursdays beginning September 24. Classes will be conducted at NYU's Washington Square Center.

Topics will include history of accident prevention in the hotel industry in New York City; employee safety; accident sequence; predominant unsafe acts, conditions, and remedies in catering. restaurants, and kitchens. Also on the agenda will be housekeeping. engineering and maintenance. front service, and clerical help safety; elevator and mechanical safety; basics of supervision; methods and techniques of emplovee training: accident "repeaters"; public liability; and hotel fire prevention.



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THREE types of awards for outstanding performance in industrial accident prevention are provided for in the "Plan for Recognizing Good Industrial Safety Records" adopted in January, 1952, by the Industrial Conference and the Board of Directors of the National Safety Council.

The three types of awards are:
1. The Award of Honor, the highest award, replaces the Distinguished Service to Safety Award. It goes to industrial establishments whose experience meets rigorous statistical standards, even though it may not be injury-free. It also goes to those which complete 3,000,000 man-hours without a disabling injury.

2. The Award of Merit has similar but less exacting requirements. The standards for non-perfect records are somewhat lower, and the minimum number of injury-free man-hours needed to qualify is 1,000,000.

3. THE CERTIFICATE OF COM-MENDATION is given only for noinjury records covering a period of one or more entire calendar years and involving exposure of 200,000 to 1,000,000 man-hours.

For qualifying calendar-year experience, all three types of awards are made automatically on the basis of annual reports submitted to the Council by members. The Award of Honor and the Award of Merit may also be made on special application in two types of cases:

 Where a qualifying total of injury-free man-hours is accumulated in some period rather than a calendar year.

Where a current period of two or more years is to be used in evaluating injury rate improvement.

Publication of awards under this plan succeeds "The Honor Roll" department formerly published in the NATIONAL SAFETY NEWS. The foregoing is but a synopsis of the award plan. For a more complete and precise statement of eligibility requirements, members should refer to the plan itself. Details may be obtained by writing to Statistics Division, National Safety Council.

E. I. du Pont de Nemours & Co.,

Erie Railroad Co., Cleveland, Stores

Firestone Tire & Rubber Co., Akron,

Ford Motor Co., Automatic Trans-

General Electric Co., Switchgear

General Instrument Corp., F. W.

Belle Works.

Sabine River Works,

mission Div., Cincinnati.

Ohio, Plant Two.

Dept., Philadelphia.

Hercules Powder Co., Lawrence, Kans., Sunflower Ordnance Works.

Humble Oil & Refining Co., Houston, Tex., (Entire company.)

- -Drilling Dept.
- -Exploration Dept.
- -Oil Pipeline Dept.
- -Producing Dept.
- -Refining Dept.

-Wholesafe Marketing Unit.

Jersey Central Power & Light Co., Asbury Park, N. J., (Entire company.) Marquette Cement Mfg. Co., Oglesby, Ill. Plant.

Masonite Co. of Canada, Ltd., Gatineau, Montreal, Unit.

Mississippi Power Co., Gulfport,

Miss., (Entire company.)
National Advisory Committee for Aeronautics, Wash., D. C., Langley

Aeronautics, Wash., D. C., Langley Aeronautical Laboratory. Ohio Fuel Gas Co., Columbus, Ohio,

(Entire company.)

Perfect Circle Corp., Hagerstown,

Ind., Plant.
Petrol Corp., Philadelphia, Wholesale

Marketing Dept.
Phillips Petroleum Co., Bartlesville,

Okla., (Entire company.) Remington Arms Co., Inc., Bridge-

port, Conn., Findlay Works.

Hion Works.

Republic Oil Refining Co., Texas City, Tex., (Entire company.)

Seaboard Oil Co., Dallas, Tex., (Entire company.)

Sun Oil Co., Ocean and Coastwise Tankers Dept.

—River and Harbor Craft Dept. Texas Co., New York City, Exploration Dept.

United States Steel Corp., Geneva, Utah, Works.

- -Ellwood Works, Ellwood City, Pa.
- -Lorain, Ohio, Works.
- -Pittsburg, Calif., Works.
- -Torrance Works.

Western Electric Co., Inc., Point Breeze Works.

Westinghouse Electric Corp., Small Motor Div., Lima, Ohio.

Wheeler Cheese Co., Green Bay, Wis., (Entire company.) Wisconsin Power & Light Co., Madi-

Wisconsin Power & Light Co., Madison, Wis., (Entire company.)

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AWARDS OF HONOR

Acme Steel Co., Chicago, (Entire company.)

Atlantic Refining Co., Philadelphia, Exploration Dept.

Blaw-Knox Co., Indiana Ordnance Works, Charlestown, Ind.

Buckeye Pipe Line Co., Lima, Ohio, Oil Pipeline Operation Unit.

Continental Oil Co., Ponca City, Okla., (Entire company.)

Curtis Companies, Inc., Clinton, Iowa, Div.

Dept. of Lighting. City of Scattle,

Wash., (Entire company.)

East Ohio Gas Co., Cleveland, (Entire company.)

Sickles Div., Chicopee, Mass., Plant. General Petroleum Corp., Los Angeles, Drilling Dept.

Harper-Wyman Co., Chicago, (Entire company.)



... about raising an umbrella in the house?

mr. Fuddy forgot himself.

He opened his umbrella before stepping out into the rain. Bad luck didn't overtake him until he closed it in the vestibule of his office. Then he slipped in the puddle left by the dripping umbrella.

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Of course, GRIPTEX is only one of many LEGGE products designed to protect you against slippery floor accidents. Why not let us custom tailor a *complete* Safety Maintenance System to your needs?

Today, clip coupon or write for this eye-opening Free booklet:





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Cases for Comment

Compiled by ROBERT D. GIDEL, Senior Engineer, Industrial Department, National Safety Council

Hernias Require Work Stoppage

A GREAT percentage of the cases submitted to the Committee of Judges involve the question as to whether hernia injuries should be included in the industrial injury rates of the company when the man claims to have been injured on one date but does not report the injury until several days later.

In a typical case, a member of the Mechanical Department reported to his foreman on Tuesday that his right side was hurting. He seemed to think that he might have a muscle strain or a rupture.

He remembered that on the previous Thursday, his crew was handling some 9-inch cast iron pipe and while holding up one end he stumbled over another piece of pipe causing most of the weight of the pipe to fall on him. At this time, however, he stated that he did not feel any sudden or sharp pain. He continued working without any interruption and finished his shift. Later that night he stated his side started burting him a little. The pain seemed high on his side and he thought he had a severe sideache, or maybe appendicitis.

He reported for work the next day and worked all that day. The pain stayed with him on through the weekend and the following Monday, which he worked. On Tuesday, he thought he ought to report it. He told his foreman and was sent to the safety office, When taken to see the physician, it was found that he had a small inguinal hernia and an operation was advised.

The Committee of Judges decided that this hernia should not be included in the company's industrial injury rates, since the reporting of this particular injury did not meet with the requirements of condition C of paragraph 2.2 of the ASA Code Z16.1, regarding stoppage of work.

Paragraph 2.2 in the Code is as fol-

Hernia shall be considered an industrial injury only if it is precipitated by sudden effort or severe strain and meets all of the following conditions:

 a. There is a clear history of accident;

b. There was actual pain in the hernial region at the time of the accident; c. The immediate pain was so acute that the injured employee was forced to stop work until the pain subsided.

In reviewing hernia cases, the Committee of Judges, has consistently made a strict interpretation of Paragraph 2.2 of the Code. Some persons asking for decisions have requested the Committee to give a rule of thumb as to just how long a person must stop work, as provided in Condition "C," in order to make the case chargeable. From the past decisions, it would seem that any stoppage of work—even momentary—would meet the requirements. It is imperative, however, that there be actual evidence of work stoppage.

Unauthorized Use of Company Car

A HOME economist, whose duties were to make home service calls, would normally have made her last call at 3:30 p.m. At that time on the date in question, she was traveling out of headquarters in a company-owned automobile. Instead of returning to her headquarters, which she could have normally reached well before the

A COMPANY competing for an outstanding safety record wants to make sure that no accidents are wrongly charged. This can be done through ASA Standard Code Z16.1.1945. If there is any doubt as to interpretation of the Code, the Committee of Judges of the American Standards Association Sectional Committee is available to review the facts.

A few of these cases are discussed briefly in this department. It is hoped that they will aid readers not only in determining the chargeability of accidents but also in planning preventive measures.

5:00 p.m. quitting time, she decided to visit some friends. She traveled 26 miles further than authorized and without informing her supervisor.

She had dinner with friends, left them after nightfall, drove 60 miles back to headquarters and had an automobile accident before she reached her home. She was injured and unable to return to work the next day.

This accident occurred between the point where she made the service call and her home. Had she returned to headquarters after making the call she would have completed her day's work at headquarters and would not have been en route home in the companyowned car. The accident occurred about 9:00 p.m., and she is not considered as being eligible for any pay beyond a normal day's work, which closed at 5:00 p.m.

The Committee of Judges decided that this injury should not be included in the industrial injury rates. This employee took herself out of the course of employment when she used the company automobile after regular hours for a private engagement.

The questions arising with regard to this case fall under Paragraph 2.1.5 of the Code involving injuries to employees such as traveling salesmen, etc., whose duties do not require them to work at a regularly established place of employment. However, the Code requires that injuries to such employees should be classified as industrial injuries if they occur during time spent on duty. What constitutes "on duty" is the question most often requiring interpretation.

Pre-existing Weakness

An EMPLOYEE was walking, empty-handed, from a carbide storage room to a repair room at the acetylene generating station. The two rooms were separated and the cement walk leading from one to the other was 7 inches lower than their floors. He stated that he was walking in a normal manner and as he stepped down onto the walk with his right foot first, his right knee snapped, but he experienced no pain until after additional steps. He did not fall. After treatment at the dispensary,

To page 122

BAUSCH & LOMB

NEW! Ortho-Weld MAGNIFYING LENSES

ORTHO-WELD

Here's greatly improved vision for the welder who wears glasses with bifocal lenses. Ortho-Weld magnifying lenses improve his comfort, skill and productivity.

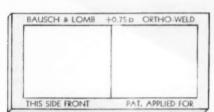
With Ortho-Weld, the worker gets the clear, sharp, closeup view normally provided by the near point, or reading segment of his bifocals—the segment which is *out of line of* vision while his helmet is in working position.

Easily inserted between the filter lens and rear cover plate in the lens holder, Ortho-Weld lenses are available in 4 "strengths," or powers, fitting the needs of most welders who wear bifocal lenses.

Welders get clear, comfortable, close-up view . . .

for welders who wear

bifocal lenses...



at all angles . . . up, down, and to the side.

The Ortho-Weld is precision molded in one piece from crystalclear lucite. It consists of two lenses surrounded by a supporting frame. Each lens is adequately centered for comfortable vision, provides full use of the helmet window. Ask your supplier of Bausch & Lomb protective eyewear, or writer Bausch & Lomb Optical Company, 90321 Smith St., Rochester 2, N. Y.

Regular bifocal segment is out of line of vision while the helmet is in working position. BAUSCH & LOMB (Jafety Cyewear



V-P Nixon Keynotes Farm Safety Week



Vice-President Richard M. Nixon (right) and Ned H. Dearborn, National Safety Council president, discuss problems at luncheon opening Farm Safety Week.

"How can we expect our children to grow up with due reverence for God-given life when they see most of us parents standing apathetically by while nearly 100,-000 funeral processions each year render grim evidence of America's disregard for life?"

This question was asked by Vice President Richard M. Nixon, as he gave the keynote talk at the National Farm Safety Iuncheon, held at the Mayflower Hotel, Washington, D.C., on July 18.

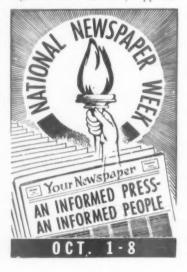
The luncheon was the kick-off for National Farm Safety Week, observed July 19-25, and was broadcast over a national hook-up by the American Broadcasting Company.

J. Earl Coke, Assistant Secretary of Agriculture, and Ned H. Dearborn, National Safety Council president, also appeared on the program which marked the tenth anniversary of the National Farm Safety movement.

". . . Perhaps it would help if more of us would learn to care." the Vice President went on to say. "I'm sure you are all familiar with that fine National Safety Council slogan: 'Be careful. The life you save may be your own.' Well, I'd suggest an enlargement of that slo-

gan to something like the following: 'Learn to care. The life you save may be that of a member of your family, a friend, a neighbor: in short, a human being; one of God's children."

"And that's where the survivors of accidental death come in." he added. "There are so many of you that your voices could be heard throughout the world if you'd lift them up in support of safety: if you resolved to speak up for law enforcement, safe practices and right attitudes at every opportu-



nity. And if these opportunities don't present themselves for you to take; make your own opportunities . . . America is truly a land of plenty; let's make it a land of safety, too,"

Second speaker on the program was J. Earl Coke.

". . . All of us in the Department of Agriculture are aware of the great suffering and tragedy accidents cause each year," he stated. ". . . Day after day brings more reports of deaths and injuries. As a matter of fact, if this is an average day, about 40 farm residents will be accidentally killed before midnight. And before this radio broadcast is over, 72 farm residents will have suffered injury since we went on the air."

"America's population is growing at the rate of 7,200 a day." Mr. Coke added, "More than 50,000 a week; more than 2.6 million a year! Each of these 2.6 million Americans means that America's farms must produce 1,600 additional pounds of food each year. . . .

"This means that every food producer in America is badly needed," he went on to say, "that we can't continue to let accidents kill thousands of farm residents each year. They must live to farm so America can live. . . ."

In summing up progress achieved by the Farm Safety movement, since its inception in 1944, Ned Dearborn, NSC president, said:

". . . When the first Farm Safety Week was observed, only two states had Farm Safety Committees. Today, 28 states have such committees.

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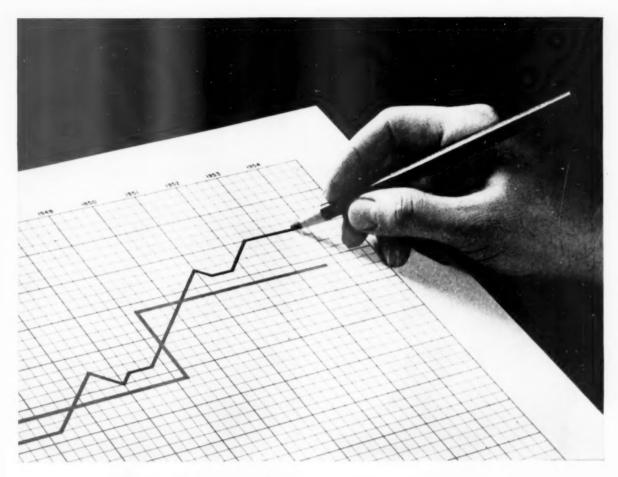
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"In 1914," he added, "there were no State Farm Safety Specialists. Today, there are 12. In 1944, there were comparatively few cooperating organizations. This year, National Farm Safety Week will be observed by the majority of all organizations directly interested in farm life and welfare . . . One organization that was with us from the start, as cosponsor of the Week, was the United States Department of Agriculture. "



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Keeping your fire protection properly balanced with changes in processes as well as ups and downs in production is vital to efficient, profitable operation.

You'll find your best answer to this serious fire problem which is currently confronting industry by installing an expansible, fully approved C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing System. Simple piping, running from one centrally located storage tank, instantly transports clean, non-damaging, non-conducting carbon dioxide anywhere in the plant area. Fire at any protected location is extinguished in seconds with an absolute minimum of expense and interruption.

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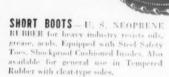


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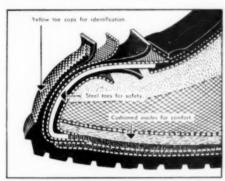
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BAR-FLEX soles insure foot comfort and arch support.



NEW NEOPRENE DAIRY BOOTS - Of handsome maroon rubber, these 12-inch high boots are

easy-on-and-off; have snug-leg comfort, strap top. Gray antislip cleated soles and heels for safety. For standing comfort, "Shockproof" Cushion Insoles,



NEW HIGH-CUT RUBBERS -

high-cut rubbers that pull on, and fit close, Extra height gives extra protection. Available in acid and oil resisting NEOPRENE rubber, or tough tempered rubber, Anti-slip soles,

ROCKEFELLER CENTER, NEW YORK

Six Railroad Crossings Eliminated

SIX major railroad crossings at street level in a highly congested industrial area of St. Louis were eliminated on July 23 when the Missouri Pacific Lines put in operation a new elevated fine and abandoned a stretch of historic track in the middle of Poplar Street.

This short stretch of track played an important part in the history of the country. The first track laid down Poplar Street from 9th Street to the levee was constructed in 1861 by the United States Army during the Civil War to permit direct transfer of Army supplies from the river to railroad cars for westward movement through Missouri.

At that time there was no direct connection between the Missouri Pacific and railroads east of the Mississippi or north and south of St. Louis. This was at a period during the Civil War when the status of Missouri in the Union was uncertain and it was important to move military supplies with the least possible delay.

New elevated structure of reinforced concrete and steel forms connecting link between Missouri Pacific's river front and Mill Creek Valley yards in St. Louis. This special train cerried city, state and federal officials and civic leaders on a trip over the new facility and the almost century old Poplar Street trackage which was abandoned with the opening of the new structure. In the background is the city-owned MacArthur bridge.

After the war this track was taken up but in 1870 it was restored by city ordinance. The track was originally authorized as a temporary measure for connection by river transfer with the Eastern railroads pending completion of the Eads bridge. It also became of great importance as it completed a new transcontinental route for movement of freight via St. Louis. It had not been previously possible to complete this route for lack of this little segment of track and the fact that railroads east and west of the river were of different gauge.

The original ordinance provided that no trains be operated

—To page 113



P. J. Neff (right), chief executive officer, Missouri Pacific Lines, and Mayor Raymond R. Tucker of St. Louis, attach cable to section of rail which was removed from track to symbolize abandonment of Poplar Street track.





One of six major grade crossings eliminated when the Poplar Street track was abandoned. The above picture, though taken during a lull in traffic, indicates how traffic was delayed when a train was crossing.



One of Four Rockwood Fire Hose Stations at a large refinery.

First aid for burning tanks

The unpretentious box and tank above act as a first aid station for the huge oil tanks in the background.

They're one of four Rockwood Fire Hose Stations at a large refinery. In case of fire, these stations provide muchneeded, on-the-spot protection until regular equipment arrives.

The box contains a 1½-inch In-line Rockwood Eductor, a 1½-inch FFF Rockwood FogFOAM Nozzle with Fog-FOAM screen attached, a 1½-inch Rockwood FOAM Shaper and 350 feet of 1½-inch rubber hose. The tank contains 125 gallons of powerful Rockwood FOAM liquid which, mixed with water and discharged through the FogFOAM nozzle, provides 20,000 gallons of fire-eating Rockwood FogFOAM. What's more, it remains in operation as long

as 35 minutes—as against 4-minute fire protection from old style hand extinguishers.

Neat, and compact, Rockwood Fire Hose Stations are another typical example of the way in which Rockwood engineers water to cut fire losses.

ROCKWOOD SPRINKLER COMPANY



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PORTABLE FIRE PROTECTION DIVISION



Rockwood Type FFF FogFOAM Nezzle with FogFOAM Screen. Available for service on 15,", 25," and 31,0" fire hose lines. Discharges FogFOAM, Solid FOAM Stream and High Velocity WaterFOG. Approved by Underwiters Laboratories, Inc.



Rockwood Type FFF FogFOAM Nozzle with Long Foam Shaper. FogFOAM pattern reaches a distance of approximately 20 feet. Solid FOAM Stream approximately 45 feet. Luscharges 50 g.p.m. 6: 100 psi.

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National Safety News, September, 1953



Charles F. Moberg Retires

CHARLES F. MOBERG has retired as manager of safety and group insurance for Kraft Foods Company, effective July 1.

He started in the accounting department, in 1929. Prior to joining Kraft, he was a claim investigator and adjuster with Railway Express Agencies, for many years.

He assumed the post of Safety and Group Insurance manager in 1938, a position he held until his recent retirement. Mr. Moberg has worked with the National Safety Council for many years, and once served as general chairman of the NSC Food Section.

Mr. Moberg was a member of the Industrial Conference Committee, and his many contacts in the food industry aided him in his job as chairman of numerous Red Cross and Community drives.

He has been honored at Kraft with 10, 15 and 20-year service awards, and the James L. Kraft merit award for outstanding service.

C. C. FITZSIMMONS has been appointed engineer to assist in the preparation and editing of non-electrical standards by Underwriters' Laboratories, Inc., Chicago. G. H. POPE has been appointed engineer of the Casualty and Automotive Department. These promotions became effective August 1, 1953.

Mr. Fitzsimmons joined the staff of Underwriters' Laboratories in 1924 after graduation from Armour Institute with the degree of Bachelor of Science in Mechanical Engineering.

Mr. Pope joined the staff in

1946 after serving with the United States Navy. He is a graduate of Northwestern University with a degree of Bachelor of Science in Mechanical Engineering.

ALAN L. KLING has been appointed assistant safety director of American Cyanamid Company. In his new position, he will assist Stanley F. Spence, the firm's safety director, in the planning and administration of the company's safety and fire prevention program.

Mr. Kling joined Cyanamid in 1951, and was in charge of safety, security and fire protection at the Bridgeville, Pa., plant prior to his new post. He was formerly assistant director of Atlantic Research Associates and at one time was in charge of the laboratory of Zenith Products.

Mr. Kling is a graduate of St. Olaf College, Northfield, Minn., and studied further at Massachusetts Institute of Technology under a teaching fellowship. He is a member of the American Chemical Society, American Society of Safety Engineers and the Society of Fire Protection Engineers.

EDWARD J. WALSH has been appointed safety engineer at Grasselli, N. J. plant of General Aniline & Film Corporation.

A graduate of Villanova College where he received a degree in civil engineering, Mr. Walsh also attended Louisville University. He has previously served as a fire protection engineer for the National Board of Fire Underwriters and prior to joining General Aniline he was safety engineer at Picatinny Arsenal, Dover, N. J. Mr. Walsh, an Army veteran, is a member of the American Society of Safety Engineers.

Frank Harrison, Pure Oil Company's veteran director of safety, will retire from the Pure Oil Company January 1, but will continue until his retirement date as a safety consultant, according to an announcement from the com-

pany's Chicago headquarters. Mr. Harrison, who joined the company in 1928, has been the only head of Pure Oil's Safety Department.

He will be succeeded by C. K. Roof of Chicago, who recently completed a quarter century of service with the company. Mr. Roof will become director of safety, effective at once. Roof has been supervisor for safety for three years. Previously he worked at the Pure Oil Company refinery at Newark, Ohio, where he was safety inspector and filled several operating positions.

Douglas C. Bartlett has been appointed safety engineer for all plant operations at The Trane Company, La Crosse, Wis., manufacturer of air conditioning, heating and ventilating equipment, it was announced by E. E. Hallander, works manager of the company.

Mr. Bartlett is a member of the executive committee of the La Crosse Industrial Safety Council. He joined the Trane firm two years ago as safety and personnel assistant after serving three years as personnel manager at the James Graham Manufacturing Company in Newark, Calif.

Appointment of Dr. Maurice Kleinfeld as Associate Industrial Hygiene Physician in the State Labor Department's Division of Industrial Hygiene and Safety Standards, has been announced by Industrial Commissioner Edward Corsi. Dr. Kleinfeld, who takes over the post vacated by Dr. May Maiers, assumed his new duties this week.

A graduate of Baylor University Medical School and a Diplomat of the American Board of Internal Medicine, Dr. Kleinfeld comes to the State Labor Department after serving as Chief Medical Officer for the United Nations. Prior to that he had been Regional Medical Officer in New York for the Civil Aeronautics Administration.



Fog 1,000 cu. ft. in 3 seconds for 5¢



Top — Magnified photo of uniform 8 micron droplets produced by precisionmachined suction nozzles of West Atomizing equipment. "Dry mist" remains air-borne for prolonged periods.



Bottom – Magnified photo of droplets produced by ordinary hydraulic compressor sprayers. Vary from 2 to 300 microns. Larger droplets fall, wetting floors and reducing effectiveness. and with only 1 ounce of Vaposector – for complete control of flying insects. Double this dosage for crawling insects,

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MEASURE RUNWAY VISIBILITY



Control Tower: Indicator-recorder, left of tower operator, is brain of Transmissometer, a new system of measuring runway visibility. Even though visibility conditions at runway may differ from conditions at control tower, operator always has accurate readings to relay to pilot approaching for landing.

The transmissometer, new photoelectric device based upon a fundamental electric design of the United States Bureau of Standards, takes the guess work out of measuring airport visibility conditions.

A projector, installed along the runway, sends a concentrated light beam across a 500-foot span to a receiver unit. The light beam is picked up by a lens system in the receiver and funneled into a photoelectric element located in the receiver chassis.

The light beam now transformed into an electronic signal, is amplified and transmitted from the element to an indicator-recorder located in the airport control tower where it charts visibility conditions on the runway. Even though visibility conditions at one end of the runway are considerably different from conditions at the control tower, the tower operator always has accurate readings to relay to a pilot approaching for a landing.

The control tower can be located as far as ten miles from main runways and still pick up sensitive readings from the system's receiver.

Nerve center of the transmissometer is the indicator-recorder. Its essential components are a bridge circuit, a milliameter with two scales and the recorder unit. One scale on the milliameter reads 0-100 per cent and the other, 0-20 per cent. Since unlimited visibility is arbitrarily set at 100 percent and extremely poor visibility at 0 per cent, the 0-100 per cent scale is used during fair weather while the 0-20 per cent range is more accurate for poor flying conditions

Enclosed in a large rectangular case and located at the front of the unit, the recorder continuously charts on graph paper the visibility percentile on airport runways.

CAA control tower operators are responsible for providing pilots with weather information. They have had the help of instruments to measure temperature, ceiling, wind direction and velocity. But there has never been a device for calculating visibility. Tower operators have had to rely upon their own judgment.

The transmissometer has several other applications besides measuring and recording visibility along airport runways. It can be connected to control automatically the brightness of airport approach and runway lights as well as detecting visibility conditions in the approach zone during instrument flying conditions.

A modification of the transmissometer can operate warning signals in state police sub-stations to indicate that fog is forming along highways. It can also be the brain behind a system of automatically controlled indicator lights that show the edges of highways and operate at various intensities dependent upon fog conditions.

Crouse-Hinds Company, Syracuse, N. Y., who recently introduced the new device, has manufactured transmissometer systems for several large air force bases.

Dressing First Rate Helps Fourth Estate

WHEN REPORTERS of the British Columbia Lumberman go out into the field to ferret out stories concerning mill and woods operations of the province's far flung lumber industry, they dress for the conditions they will meet. Hard hats, calked boots and bloused or shortened trouser cuffs are the sartorial order of the day.

F. S. Perry, managing editor, reports that experience has shown the safety man is usually the better man to contact, if they want to learn about plant or mill operations. Lumberman reporters also bone up on the latest safety rules and practices. They report that arriving upon the scene properly garbed, and with a little knowledge of what is going on, really helps when they attempt to round up a story.





Safety is no accident

When JOY electrical connectors are on the job

In Industry . . . metallic dust, grime, moisture and careless handling are dangerous enemies of electrical connector performance. Constantly present around most installations they quickly try to increase resistance, crack insulation, fray wiring and corrode contacts, thereby shortening the life span and reducing the safety of electrical connectors. Fortunately, JOY plugs and receptacles are little affected by these conditions. Vulcanized to their cable as one-piece molded Neoprene units, they can't crack . . . won't lose shape . . . and require no special consideration to insure a long life of safe, efficient service. Hundreds of styles and sizes are now available for Industrial needs. So for safety's sake remember JOY when you next need electrical connectors . . . and in the meantime ask for your free copy of Bulletin MC108. It provides valuable additional information on Industry's favorite plugs and receptacles.

MORE THAN 100 YEARS ENGINEERING LEADERSHIP

BULLETIN MC108





JOY MANUFACTURING COMPANY

Joy Engineer

No Chance of Shock



SAFETY is built into this new dielectric tester recently installed at the Anderson, Ind., Mill of Anaconda Wire & Cable Company. The instrument handles test voltages up to 15,000-volts yet it is so constructed that opening of any one of its several doors immediately interrupts all current. Leonard Baker, laboratory technician, here tests insulated magnet wire in quality control testing done around-the-clock on production run of every machine.

Sanitary Standards for Dishwashing Machines

Publication of the third in a series of nationally uniform sanitation standards for the protection of the public in the use of foodservice and other health-related equipment has been announced by Dr. Henry F. Vaughan, president of the National Sanitation Foundation (NSF) and dean of the University of Michigan School of Public Health.

Known as NSF Standard No. 3, Spray-Type Dishwashing Machines, it is the result of more than two years of work on the part of Foundation committees to bring about agreement among manufacturers and health authorities the country over as to what methods of washing dishes, utensils and glasses are satisfactory from the health point of view for use in public eating places.

Other standards published so

far in the NSF series concern equipment for soda fountains and luncheonettes, and food-service equipment for hotels and restaurants.

W. D. Tiedeman, executive director of the NSF Testing Laboratory which assisted in the establishment of the new dishwashing machine standards, says that, as far back as 1880, American inventive genius was at work on the problem of mechanical dishwashers.

Early machines, many of which were fantastic as to size and design used hand-operated cranks to lower baskets of soiled dishes into tubs of water. Circulating pumps of those days were "cumbersome units sometimes driven by steam or by gasoline engines," and the hot water used was only lukewarm by present-day standards.

The National Sanitation Foundation was established in 1944 as a clearing house, through which

manufacturers and health officials could meet to determine sanitation specifications for all equipment which, in its use, might affect the public's health. Several hundred companies and foundations help support the NSF's nationwide program of sanitation education, research and service.

Plan World Standards for First Aid Equipment

To save Lives in disaster and on the battlefield, representatives of American interests meeting in New York on July 15 voted to participate in international standards projects aimed to bring about international interchangeability in transfusion equipment and stretchers and stretcher carriers.

The conference of government and health specialists and medical supply manufacturers called together by the American Standards Association recommended the entry of this country into the international undertaking now underway under the procedure of the International Organization for Standardization (ISO). The conference further recommended that corresponding American Standards be developed.

Original proposal of participation came from the Federal Civil Defense Administration. This agency is responsible for the medical care of the civilian population in the event of enemy-created disasters. It now stockpiles medical equipment and uses the specifications of the Armed Services Medical Procurement Agency in its procurement. These specifications will be used as initial proposals in the international discussions.

The conference authorized the organization of advisory committees in both fields to decide the details of American participation and to determine what specifications will be proposed to the international committees which are already functioning. The specifications of the ASMPA are being turned over to the committees for consideration as a basis for these proposals.

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SMART LOOKIN' SAFETY SHOES



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Rich English Brown Leather. Genuine Full Grain Wing Tip— Full Cushion Insole, Dacron Stitched.

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Chlorine

(From page 37)

mospheric concentration of chlorine. All require the service of a technician and rather elaborate sampling or analytic equipment. There are no simple colorimeter-bulb type analyzers similar to those used for carbon monoxide or benzene. There is a monitoring device on the market which is sensitive in the range one to four parts per million.



Figures 6 and 7. These clamp-on bells with side valves will enclose a leaky valve on a cylinder or ton tank and permit the chlorine to be withdrawn safely. (Courtesy Solvay Process Division, Allied Chemical and Dye Corp.)

Shipping and Storage

12. Chlorine is available in small steel cylinders as a liquid. It is also supplied as a liquid in steel cylinders containing 100, 105 or 150 pounds, in tanks holding 2,000 pounds, and in single unit tank cars holding 16, 30, or 55 tons. It is also shipped by multitank barges in quantities up to 600 tons (Figure 3),

13. Cylinders and ton tanks are equipped with fusible plugs designed to melt in the range 158 to 165°F. Cylinders are tested at 800 pounds per square inch and ton tanks at 500 pounds per square inch. Larger shipping containers, tank cars and barges are not equipped with fusible plugs but are provided with safety valves. Those on tank cars are designed to open at pressures above 75 per cent of the test pressure, and to be tight at 60 per cent of test pressure. The safety valves on barge tanks are set to be opened at the maximum working pressure of the container.

14. It is general practice on large containers to equip the lines leading from the container with valves to limit the discharge rate. The I.C.C. requires that liquid eduction lines on single unit tank cars be equipped with flow limit valves.

15. Chlorine cylinders and tanks should be stored in cool, dry,

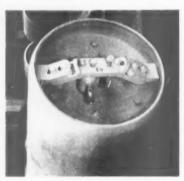




Figure 8. Compresses like this may be used to control a leak in a cylinder sidewall. (Courtesy Solvay Process Division, Allied Chemical and Dye Corp.)

relatively isolated areas, protected from weather and extreme temperature changes. Cylinders should be stored in an upright position and secured so they can not fall over. Tanks should be stored on their sides on rails a few inches above the floor. Storage inventories should be as small as possible. Containers should be stored with enough room between them so each is completely accessible in case of an emergency. Valve protecting caps should be kept on at all times. Full and empty con-



Figure 9. An employee is shown testing the fit of a canister-type gas mask. (Courtesy Industrial Safety Equipment Association.)



AND GUARANTEED TO SAVE YOU MONEY!

In a series of gripmeter tests of "Plastic-Dot" versus regular canvas gloves, Sailor White, the famous strong man, more than doubled his gripping power when he wore "Plastic-Dots."

Riegel "Plastic-Dot" work gloves are guaranteed to outwear two or more pairs of heavy canvas gloves. They will save you money on any operation where you are now using any weight or make of regular canvas gloves. At the same time, they provide a safer, surer grip... with full working comfort.

See for yourself how this amazing glove wears and wears! Send for a free pair for testing, together with full information and complete list of local distributors.

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WHATEVER your safety needs may be, you can get the right garments from Wheeler to handle the protection job. The Wheeler line is complete, and Wheeler garments are tailored to fit the man as well as the need, giving the utmost in worker comfort, safety and job efficiency. A choice of heat, abrasive and acid resistant materials is available in any of the standard safety garments as well as special garments made to order.

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Figure 10. The supplied air breathing apparatus like this with separate air supply and long hose will permit the wearer greater mobility and allow him to remain in a contaminated area for a considerable length of time. (Courtesy Industrial Safety Equipment Association.)

tainers should not be stored together.

16. Containers should be protected from external sources of heat. The storage area should be well ventilated. However, there should be no possibility that escaping chlorine can enter a general ventilating system. The gas is heavier than air and should be stored so that escaping gas will not accumulate to cause trouble,

17. Chlorine will react violently with hydrogen, acetylene, ammonia, fuel gases, ether, turpentine, most hydrocarbons, finely divided metals, and organic matter. These materials should be stored so that mixtures are impossible.

Handling

18. Cylinders and small tanks should be transported on special hand trucks. If possible, hoisting should be avoided. Should it be necessary, clamps or cradles are to be preferred to slings. Magnetic lifting devices should never be used. Chlorine containers should never be dropped or otherwise handled roughly.

19. Cylinders should be discharged in a vertical position and tanks in a horizontal position. Gaseous chlorine will be discharged from a cylinder if the valve is up. If it is to discharge liquid, the cylinder should be inverted. Ton containers are fitted with two valves. When the container is positioned so one valve is directly above the other, the top valve will discharge gaseous chlorine and the bottom valve will discharge liquid chlorine (Fig. 4).

20. There are four discharge valves clustered about a central safety valve in the dome of a chlorine tank car. The two valves which point along the length of the car will discharge liquid chlorine: the two which point across the car discharge gaseous chlorine. On some 55-ton tank cars one of the gas valves may have been replaced by a second safety valve.

21. Valves on both cylinders and ton containers are designed to deliver full volume after one complete counterclockwise turn. Turning beyond this point may damage the valve. A wrench longer

TABLE I

Alkaline Solutions for Chlorine Absorption

| Chlorine | Causti | c Soda | Sod | a Ash | Hydrate | d Lime* |
|------------|--------|--------|------|-------|---------|---------|
| Container | L | Water | | Water | | Water |
| Size | Lhs, | Gals. | Lbs. | Gals. | Lhs. | Gals. |
| 100 pounds | 125 | 40 | 300 | 100 | 125 | 125 |
| 150 Pounds | 188 | 60 | 450 | 150 | 188 | 188 |
| One ton | 2500 | 800 | 6000 | 2000 | 2500 | 2500 |

*(Lime solution must be continuously agitated to allow complete absorption.)

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accident rates but also the cost of preventing them.

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Figure 11. A supplied air hood like this will protect the head and neck of a person who must work in a chlorinecontaminated atmosphere. (Courtesy Industrial Safety Equipment Association.)

than six inches should not be used to open or close valves on cylinders or ton tanks. The twisting force possible with a larger wrench may damage the valve.

22. Heat should never be applied to containers to increase the discharge rate, nor should cylinders be manifolded to increase output. A possible venturi effect may cause one of the cylinders to fill with liquid and result in a rupture when the valve is closed, If the rate of discharge must be increased, liquid should be withdrawn and vaporized.

23. Tank cars being emptied should be well chocked and warning signs must be displayed. I.C.C. regulations must be followed. Derails should be set out and the blue flag posted. The siding switch or switches should be locked closed. The hand brakes should be set and the car wheels checked before connections are made to permanent plant plumbing.

24. A flexible piece of annealed copper tubing may be used to connect the tank car to permanent plant piping. Such a connection will allow for the slight changes in the height of the car as it empties.

-Next page



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25. If it is necessary to supply pressure to a tank car being unloaded, nitrogen or well-dried air (dew point -20°F) free from organic vapors should be used and supplied to the car through a gas valve. Pressure should never be allowed to exceed 125 pounds. If air is used it should be supplied by a two stage (150 lbs. max.) air compressor used solely for this purpose. A pressure reducing valve, an oil trap and cooler, a directional flow check valve, and drying columns should be placed in the line between the compressor and the gas valve.

26, Extra heavy black iron or steel pipe (schedule 80) is recommended for liquid or gaseous chlorine lines. Drop forged steel fittings and flange unions (at least four-bolt) should also be used. Lines should be fitted with expansion chambers capable of holding 20 per cent of the volume of the line between valves.

27. Gaseous chlorine lines should be fitted with 35-pound reducing valves to prevent condensation. Pure chlorine gas will readily condense under normal temperatures if the pressure exceeds this value.

Leaks

28. Occasionally leaks develop in chlorine lines and containers. They must be given prompt attention because they will grow progressively worse (Figure 5). When a leak develops, the area subject to contamination should first be cleared of personnel, and until the danger is removed only specially trained and equipped men should be permitted in the area. All personnel should keep upwind of and on higher ground than the chlorine leak.

29. A leaking valve in a cylinder or ton tank can usually be repaired by tightening the packing nut. Only the wrench supplied by the chlorine shipper should be used. A longer wrench will damage the valve.

30. If a leak develops in a line every effort should be made to close the valves on each side of it. The valve at the container should be closed.

31. A rag dipped in ammonia water and tied to a stick or an atomizer filled with ammonia water is useful in locating a leak. A white smoke will show the location of the leak. Once the leak has been located, every effort should be made to close it. If this is not possible the container should be disconnected and removed to where it will do the least harm. If possible the container should be turned so the leak is uppermost. In this way only gaseous chlorine, and hence at normal temperatures only 1/450 the volume of a liquid leak, will

32. Water should not be sprayed on a chlorine leak to reduce the amount of chlorine gas or liquid. It will only increase the leak. If it is impossible to close the leak or move the container, the gas should be drawn off and neutralized in an alkaline solution (See Table I).

33. Emergency leak kits are on the market for cylinders, ton tanks, and tank cars. They consist of a steel bell and gasket fitted with a valve to enclose a broken container valve or one with an uncontrollable leak (Fig. 6 & 7). They also contain compresses and clamping devices to stop leaks in container walls (Fig. 8). They should be on hand at all times and in good repair. The chlorine supplier whose name is on the container or the nearest chlorine manufacturer should be contacted immediately if these or the above measures do not control the leak.

34. Welding, cutting or other hot work should not be attempted on chlorine lines or containers until they have first been purged with steam and then hot-air-dried. As a substitute they may be filled with carbon dioxide and this work done safely provided the line is first fitted with a low pressure safety valve.

Protection

35. All employees who handle chlorine should be provided with gas masks specifically designed for chlorine-contaminated atmospheres. They should be taught



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when and how to use them and how to recognize defects in them. (Figure 9). The U. S. Bureau of Mines approved mask with a type A (white with ½ inch yellow stripe at bottom) canister is recommended for use in acid gas atmospheres of concentrations not greater than 2 per cent and oxygen not less than 16 per cent.

36. Employees who are to work in contaminated areas, for instance repair crews handling ruptured lines or containers, should be equipped with impervious clothing and either hose masks or self contained breathing apparatus (Figures 10 & 11).

37. Areas in which contamination is likely should be equipped with easily accessible extra masks. Clear instructions should be posted as to how they are to be used. Workers who find themselves in a contaminated area without a mask should try not to breathe until they reach safety. If this is impossible they should be taught to breathe only with the top of the lungs (short, shallow breaths). This will lessen any lung damage.

38. As with any type of personal protective equipment employees should be trained in its use and should have periodic practice drills. This will save considerable time in an emergency.

First Aid

1. Remove victim from the contaminated area at once. Keep him warm and quiet (room temperature 70°F). Do not allow him to move. He is apt to be panicky if conscious, so reassure him.

2. Lay the victim on his stomach with his head and chest slightly lowered. If the victim is conscious do everything possible to discourage coughing. If necessary elixir of terpin-hydrate or essence of peppermint can be given, but only if the victim has some control over his own movements.

3. Call a physician to the victim as soon as possible.

4. Oxygen should be administered until the victim is able to breathe easily by himself. Oxygen administered with an exhalation back-pressure of 2½ inches of water will do much to reduce the dangers of developing edema.

Contaminated clothing must be removed. Skin areas exposed to either the gas or liquid should be flushed with water.

6. If breathing seems to have stopped, artificial respiration (back-pressure, arm-lift) should be started at once. Oxygen should be given at the same time.

Symptoms of Chlorine Exposure

39. Persons exposed to the gas become restless, sneeze, develop a raw throat, and salivate copiously. As the exposure continues breathing becomes difficult and retching or vomiting will commence.

Acknowledgement

This data sheet was prepared by Stewart A. Washburn, Senior Engineer, Industrial Department. It has been reviewed by the Safe Practices Conference Committee and approved for publication by the Council's Industrial Conference.

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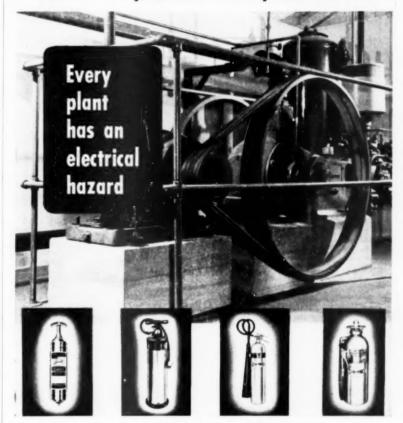
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-Next page

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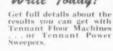


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Post Office Improves Fleet Safe Program

A MOTOR VEHICLE accident claims and safety committee of the Post Office Department has been established to apply modern fleet management accident prevention controls to postal fleet operations and to improve accident investigation and claims and pro-

The safety director of the Post Office Department, Edward B. Landry, will chairman the commit-

The committee is authorized through its chairman to obtain assistance from any group, organization, or individual whose knowledge, information and experience will be helpful to the committee in the performance of its task. Such consultative services are to be gratuitous unless otherwise authorized,

When completed, the committee's report will then be transmitted to the office of Deputy Postmaster General C. R. Hook, Jr., for action.

Safety Films

NEW FILMS

Information on the following films was received too late for inclusion in the 1953-54 edition of the Current List of Safety Films,* which appeared in the June issue.

Material Handling

Operator's Care and Maintenance of Materials Handling Equipment (16mm sound motion) black & white, 17 min. This film gives rules for the safe operation and maintenance of fork lift trucks used by military personnel, but is applicable to general industry as well. Source: United World Films, Inc., 1445 Park Ave., New York 29, N. Y. Availability basis: purchase.

Hospital and Laboratories

The Practice of Radiological Safety (16mm sound motion) black & white, 33 min. Shows how shipments of radioactive materials are handled, the preparation of doses for therapy, and the manufacture of synthetic compounds. Placing strong emphasis on safety precautions, pictures the protective clothing and metering equipment used by personnel handling these materials. Source: United World Films, Inc., 1445 Park Ave., New York 29, N. Y. Availability basis: purchase.

Petroleum Industry

Safe Every Second (16mm sound motion) color, 22 min. Production date, 1952. Centering around a typical service station, this film illustrates, both humorously and grimly, the hazards encountered by attendants. Lack of knowledge and such "human" reactions as eveing an attractive woman when attention should be elsewhere are shown to pay off in tragic and costly injury. Source: Standard Stations, Inc., 225 Bush St., San Francisco 20, Calif. Availability basis: free loan.

Railroads

Safety In Action (16mm sound motion) color, 26 min. Production date, 1944. Documents a number of unsafe railroad practices and offers safety hints to trainmen, enginemen, and mainte-

PROTECTION - WHERE ACCIDENTS BEGIN





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Manufacturers & Distributors of Industrial Safety Equipment

5721 W. 96th St., Los Angeles 45 Other Offices in San Francisco and Houston nance of equipment men. Some of the points covered are riding on moving equipment, handling brake clubs and power handbrakes, dangers of adjusting coupler knuckles on moving cars, and safe clothing and protective equipment. Ends with some shocking scenes designed to make viewers agree the "unsafe practices can bring very harsh treatment." Source: The Denver & Rio Grande Western Railroad Co., P. O. Box 2040, Denver 1, Colo. Availability basis: purchase or free loan.

CHANGES

The availability basis of the following films has been changed since the appearance of the Current List of Safety Films,*

These eight films, listed as available for television use, have not been cleared for this medium. They are Before His Time. It Doesn't Have To Happen, It's Your Choice, Maintenance of Way Mishaps, My Brother's Keeper, Safety At Switch And Throttle, Struck Or Run-Over, and Suspended Sentence. They are still available for regular use from the Southern Pacific Company on a purchase or free loan basis.

Burning The Safe Way and Welding The Safe Way, which were available from the National Safety Council, have been withdrawn because the materials and methods shown are now obsolete.

*The National Directory of Safety Films, a separately bound version of the Current List of Safety Films, can be obtained from the National Safety Council, 425 North Michigan Ave, Chicago 11. Single copies are 75c.

Form Occupational Health Nursing Council

Organization of a Council on Occupational Health Nursing was one of the high spots of the first Convention of the National League for Nursing, held in Cleveland in June. More than 4,500 men and women attended the week-long sessions.

Mary Louise Brown, assistant professor of public health (occupational health nursing), Department of Public Health, Yale University School of Medicine, was elected chairman. Vice-chairman is Mrs. Teresa Gorman, head nurse of the American Can Company, St. Paul.

A panel discussion during the meeting considered the place of occupational health nursing in the total nursing picture. Anna Fillmore, general director of the NLN, explained that an interdivisional council of the NLN is concerned with a specific area of nursing and assists with the development of the National League for Nursing program as it relates to that special field.

Safety Equipment For the Asking

If you don't have it, we'll loan it to you. This is the policy of the West Virginia Pulp and Paper Company, of Tyrone, Pa., regarding safety equipment for outside contractors working on company property.

When the contractors arrive, they are met by Robert K. Meredith, the mill's safety director. His job is to find out if the contractor's workmen are provided with safety equipment. If not, he offers the free use of such safety items as hard hats, protective clothing, goggles and, if needed, respirators and face masks, together with full use of the mill's first aid facilities.

Mr. Meredith says, "We believe a safe job is an efficient one, and the fact that our workmen see others making use of safety equipment brings home to them the sincere desire of our management that everyone should work in safety."

U.S. Engineers Win Army Safety Award

The Army Award of Merit for Safety was recently presented to the Ohio River Division of the Corps of Engineers. The Division supervises military construction in the Ohio Valley and Great Lakes region and won the Award for their construction safety record during 1952.

Contractors and military personnel worked on ordnance plants, training camps, airfields and storage depots. With 7,000 men working 13,921,200 man-hours there were 71 lost-time accidents for a frequency rate of 5.1 injuries perone million exposure-hours.

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- Can be used with safety on Asphalt Tile and all other types of floors, also walls, furniture, woodwork, or any surface from which dust or loose soil is to be
- 2. Sprayed or brushed on, it picks up dust particles-then evaporates, leaving no residue, providing a dust-free floor with renewed lustre.
- Contains NO emulsified oil. Leaves no oily residue to darken, discolor, soften or bleed colors.
- Will not soften wax film.
- 5. Will not decrease frictional resistance.
- NON-FLAMMABLE-has no flash point yet will not freeze. Rags saturated with the solution will not burn, eliminates fire hazard in use or spontaneous combustion of mop in storage.
- Won't load mop. After using, simply shake out the brush or cloth and it's ready to use again. Saves on laundry and dry cleaning bills.

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New Records in Mining Safety

FOUR NEW SAFETY RECORDS were established in the mining industry during the 1952 National Safety Competition, conducted by The Bureau of Mines, U.S. Department of the Interior and the industry.

The new records are:

- 1. All six winners had perfect safety records.
- One hundred and eighty-six mines and quarries chalked up perfect no lost-time accident records.
- New lows in injury-frequency and severity rates for bituminous-coal mines were established.
- 4. A new low for injury-frequency in anthracite mines was achieved.

All this in spite of the fact that last year's contest saw more metal underground and open-pit mines enrolled than ever before in the 28-year history of the competition.

A bronze Sentinels of Safety trophy provided by The Explosives Engineer is presented to each of the six winners. When two or more competing plants have had injury-free records for the year, their ranking is determined by the number of man-hours worked.

In addition to the bronze trophy, a Sentinels of Safety flag, also donated by *The Explosives Engineer*, is awarded to each winner.

As a tribute to and in recognition of their part in making the best safety records among contestants, each employee and official at a winning plant is presented with a Certificate of Achievement in Safety by the Bureau of Mines.

The certificates testify to the fact that the Sentinels of Safety trophy and flag could not have been won without the complete cooperation of each worker and supervisor. The certificates are also awarded to the next four ranking plants after the winner and to plants that had no disabling injuries during the year, provided 30,000 or more man-hours were worked,

The records of the following operations won top honors in the 1952 competition:

Anthracite underground mines: Hunter Tunnel Mine of The Philadelphia and Reading Coal and Iron Company at Ashland, Pa.

Bituminous-coal underground mines:

Short Creek coal mine of the Tennessee Coal and Iron Division, United States Steel Corp. at Adamsville, Ala.

Metal underground mines: Buck mine, Pickands Mather and Company (The Verona Mining Company) at Caspian, Mich.

Nonmetallic underground mines: Annandale limestone mine, Michigan Limestone Division, United States Steel Corp. at Boyers, Pa.

Open-pit mines: Noralyn phosphate pit of the International Minerals and Chemical Corporation at Bartow, Fla. Quarries: Hillsville limestone quarry, Michigan Limestone Division, United States Steel Corp. at Hillsville, Pa.

As judged from past records, the injury experience in 1952 was considerably lower than the average over the 28 years of the contest. The frequency rate, although virtually identical with that recorded in 1951, was almost 39 per cent lower than the average. The severity rate, the second lowest rate in the over-all record of 28 contests, was 28 per cent lower than the average.

Since 1925, the contest has had a progressive effect in the promotion of accident-prevention work in mines and quarries throughout the country. Operations participating are grouped into six classifications: anthracite underground mines, bituminous-coal underground mines, metal underground mines, nonmetallic underground mines, open-pit mines, and quarries. The five mines and one quarry having the lowest injury-severity rates, or the number of days lost through disabling injuries for each 1,000 man-hours of worktime, are the winners in the groups in which they have enrolled

The 1952 Committee of Award members were: Ned H. Dearborn. president, National Safety Council; L. C. Campbell, president, National Coal Association; Charles Ferguson, acting director, Safety Division, United Mine Workers of America; Howard I. Young, president, American Mining Congress; Andrew Fletcher, president, American Institute of Mining and Metallurgical Engineers; A. T. Goldbeck, engineering director, National Crushed Stone Association, Inc.; and C. D. Franks, executive vice president, Portland Cement Association.



Safety condition your plant with "SAFETY-WALK"

Here's the new mineral-coated fabric that provides perfect traction—sure footing—even under water or grease! And it's easy to apply, easy to keep clean. Use "SAFETY-WALK" Non-

slip Surfacing also on stairways, ramps, walkways—wherever the danger of a fall is present. It pays off in accident prevention, better employee relations . . . stops costly production delay.

| FREE SAMPLE! Please send me "SAFETY-WALK" sample and complete information | SAFETY-W |
|---|---|
| Minnesota Mining & Mfg. Co. Dept. NS-93, St. Paul 6, Minn. | 30 6-7 8. E. S. A. A. |
| Name | WETORDRY NON- |
| Company | SURFACING |
| Address | Made in U.S.A. by Minnesota Mining & Mfg |
| CityZoneState | St. Paul 6, Minn. |

Also makers of "Scotch" Brand Pressure-Sensitive Tapes, "Scotch" Sound Recording Tape, "Underseal" Rubberised Coating, "Scotchite" Reflective Sheeting, "3M" Abrasives, "3M" Adhesives. General Exports 122 E. 42nd St., New York 17, N. Y. In Canada: Landon, Ont., Can.



Which Life-Saver Would YOU Use?







IF... a defective valve had to be changed in a unit handling dangerous chemicals. Corrosives involved were hazardous to the skin. Exposure would mean hospitalization for the workmen. An added peril was that of toxic fumes.

WHEN ... corrosive chemicals are on the loose, your life-saver is the StaSafe Acidmaster. The wearer is completely en-closed in chemically resistant Gra-lite. Also enclosed in the suit is a selfcontained air supply sufficient for 30 minutes of extreme exertion.

For additional information on the StaSafe Acidmaster and other chemically resistant clothing write today for Bulletin No. 21.

EQUIPMENT COMPANY STANDARD SAFETY CHICAGO 10. ILLINOIS 232 WEST ONTARIO STREET

NEWARK 4, N. J. 597 BROADWAY

CLEVELAND 10, OHIO 855 EAST 152nd ST.

LOS ANGELES 16, CAL. 2952 CRENSHAW BLVD.



CHICAGO Watchclock System

"The first . . . and still the first." LOWERS YOUR INSURANCE RATES!



It keeps track of your watchman's tracks-so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABOR-ATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCH-CLOCK System quickly returns its small cost to you.

new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property Write for it NOW!

CHICAGO WATCHCLOC DIV. GREAT LAKES INDUSTRIES, INC.

1524 S. WABASH AVE., CHICAGO 5, ILL

......

OFFICES IN PRINCIPAL CITIES

SEECLOTH

CLEANS AND MISTPROOFS



WHAT SEECLOTH IS:

SECLOTH is a chemically freated fabric which when rubbed on glass both cleans and prevents fogging or misting. It has found use in industry as a convenient method for cleaning and preventing the fogging of goggles of workers who must protect their eyes in various industrial operations.

ECONOMICAL:

It is the most convenient and economical method known for this purpose. One piece (8" x 9") will last for a number of months, when used on gaggles or glasses.

INCREASES WORKER SAFETY:

The fact that the worker has the means for preventing misting of his goggles right on the job increases the safety of the operation since it reduces the temptation to continue to work with misted glasses. He can fogproof them without leaving his work.

HOW TO USE SEECLOTH:

All that is necessary is to wipe the dry glasses with the dry SEECLOTM and thus mistproof the glasses for a considerable period.

OTHER USES:

SEECLOTH has also found use in preventing misting of the inside of windshields in foggy or damp weather. Here also all that is necessary is to rub the dry glass surface with the dry SEECLOTH. Mist will then not form on the area that is rubbed. Other applications include its use on spectacles, mirrors, windows, etc.

HOW SEECLOTH IS PACKAGED:

SEECLOTH IS SOLD IN 8" x 9" pieces, packed in a polyethylene envelope which fits asily into the pocket of the coveralls as that the worker can use it right on the job with practically no lost time.

SEECLOTH is also available in larger pieces for windshields or by the yard (36" wide). Special sizes cut to order.

Hygiene Research, Inc.

684 Broadway New York 12, N. Y.
2704 S. Hill St. Les Angeles 7, Calif.
Samples on request. Write Dept. N53.

Quotable Quotes

. . . From DR. J. L. ROSENSTEIN

"Reaction organization" is the name given to the pattern or form in which several reactions combine themselves to make up what appears to be a single act. We recognize people by their reaction organizations or patterns of behavior. We call some of them mannerisms, peculiarities, and idiosyncrasies.

People do not react to things or to situations. They react to the meanings things and situations hold for them. Find out what a thing means to a person before judging his acts.

Individuality of behavior is based on differences in the experiences of persons.

Regardless of what a person does, learn why he does it. The act is only an end product. Study the history of the development of the act.

A psychological defense is a way of evading the unpleasantness of real lif-

One way of dealing with difficulties is to evade them. One may evade by daydreaming, by telling one's self it is someone else's fault, by bolstering one's self-esteem by creating imaginary success, or by living in the past.

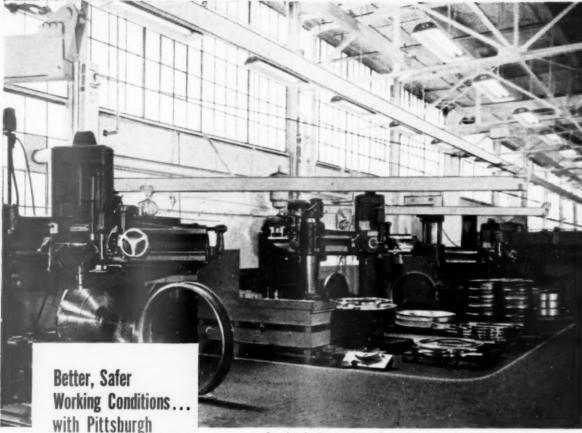
The more noble the reasons given for an act, the less likely they are to be the true reasons.

Regression means going back to a state in which happiness existed. Harking back to the good old days and finding life in the past to be the only good, real, honest, worth-while life is running away from the present.

It is easier to believe that the foreman "has it in for me" than to admit that "I am not so good as I should be."

Compensation is a means of evading by "making up for" some weakness. Telling one's self that one is better than is really true, working or studying too hard to make up for inability to compete, being pompous and self-important are ways of compensating.

Dr. J. L. Rosenstein was formerly Professor in the Department of Management at Loyola University, Chicago. These excerpts are from his One Day Course in Human Relations for Supervisors.



Fawick Airflex Division, Federal Fawick Corporation plant in Cleveland, Ohio, looks clean, bright and pleasant three years after being painted according to COLOR DYNAMICS.

Choice of right colors for walls, ceilings and machines improves workers' morale, reduces housekeeping and accident hazards in modern plant of largest manufacturer of pneumatic clutches and brakes.

COLOR DYNAMICS*



THE THREE-YEAR experience of Fawick Airflex with Pittsburgh COLOR DYNAMICS adds convincing proof that wise and careful use of color is a profitable investment that benefits both management and workers.

● The Fowick Airflex Division of the Federal Fawick Corporation is the largest manufacturer of pneumatic clutches and brakes for all types of industrial machinery.

This plant was painted according to COLOR DYNAMICS early in the summer of 1950. Morale-building colors with high light reflectance were used on ceilings and upper walls, making the entire work area brighter and more cheerful. Eye-rest colors were used on lower walls to lessen eye fatigue. The machinery was painted with focal and eye-rest colors

to permit the operator to see his job better. Safety colors were applied on operating controls, mobile equipment and traffic lanes to increase safety.

 No better summory of the satisfactory results that were achieved can be made than this comment by R. S. Huxtable, President of the Federal Fawick Corporation:

• "COLOR DYNAMICS has raised efficiency and productivity in our plant. Also, we are certain that the improvement in morale and in our relations with the working force has fully justified our selection of COLOR DYNAMICS. Being proud of their pleasant surroundings, our employees help to keep their work areas clean. This simplifies housekeeping. Moreover, we have been most pleased with the way Pittsburgh Paints have held up."

Get a FREE Color Engineering Study of Your Plant!

Painting your plant according to COLOR DYNAM-ICS costs no more than a conventional maintenance job. Why not investigate what this modern system of putting color to work will do in your factory or office? Send for our free book which explains what

COLOR DYNAMICS is and how it works. Better still, call your nearest Pittsburgh Plate Glass Company branch and ask to have a representative give you a color engineering study of your plant, or any part of it, without cost or abligation. Or mail this coupon.

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COMPANY

SEND FOR THIS FREE BOOK!

Pittsburgh Plate Class Co. Palet Blv.

Please send me a FREE cyour booklet "Calor Dynamical Please have your representable for a Color Dynamics Sufficient Sufficient Sufficient Programmes Suffi

Department HSN-83, Pittsburgh 22, Pa.

IN CANADA: CANADIAN PITTSEURGH INDUSTRIES LIMITED

Copr. 1953. Pittsburgh Plate Glass Co., Pittsburgh, Pa

For a Successful Poster Program





JUMBO POSTER +0 OCTOBER 1953

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members an annual subscription but is not stocked. Its actual size is 9, 11, by 11, 8,

THE 1953 Poster Directory contains miniatures of 756 posters—top-notch selections on a great variety of subjects. Extra copies available at 50 cents each—write Membership Dept., N.S.C.

Posters miniatured on the following two pages are new shown for the first time. While illustrated in one color, these posters are actually printed in two or more colors.

Here's Safety's BRIGHTEST Saying...



To augment your visual aids program . . .

NEW SAFETY BUMPER STRIPS
. . . IN FLUORESCENT FIRE-ORANGE DAY-GLO

Effective—inexpensive—practical—printed on heavy stock—pressure sensitive adhesive for easy application to any surface without moistening. Easily removed without sailing or scraping. Size is 4x15 inches.

Ideal as constant safety reminders when posted in the plant—or away from the plant on the rear of company vehicles or employee's cars.

Imprinting available-details and prices in WHAT'S NEW, Page 101, this issue



0029-C

25×38

Above new "C" poster, issued monthly, is indicative of the other two color posters—shown in one color on the following pages and in the 1953 Poster Directory.

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors

(Available only in sizes indicated)





Won't you older hands teach safety to us NEW guys?

9974-A 812x1112



0006-A 812x1112

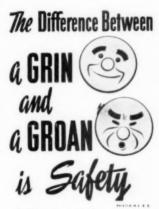


9925-A 8

812x1112



9969-A 812x1112



9977-B 17x23



9995-B 17×23



9927-B 17x23



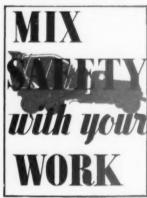
9904-B 17x23



9971-B 17×23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Posters below are printed in two or more colors (Available only in sizes indicated)



0007-A 8½x11½



9886-A 812x111/2

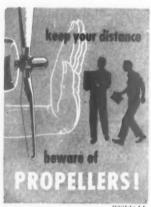
Watch for THE MAN ON FOOT!

BACK FROM YOUR SIGHT (LEFT) SIDE

9976-A 8½x11½



T-9938-B 17x23



0010-A 812x1112



Billie the Bloodhound

RIGHT ON THE TRAIL OF THE GUY UP AHEAD, HIS ACTION IS A CRIME. IT HAPPENS WHEN THE LIGHTS TURN RED

HE CAN'T STOP ON A DIME!

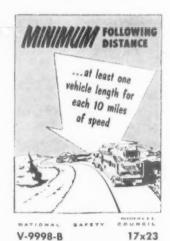
V-9981-A

812x1112

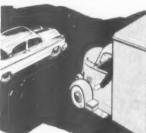
Passing safely is an art
Based on this simple rule—
"Don't yass at crossings, hills or curves
Unless you are a fool."



V-9997-B 17x23



Let trouble CROSS your path



It's better than being <u>DEAD</u> to rights

V-9996-B 17×23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.



Film Thrills Teach Safety

Safe As You Make It, the Council's new sound motion picture, combines amusement park thrills with sound safety training.

The film contrasts the safety of the high rides with the hazards of the safe-appearing things we encounter every day—on-the-job, behind the wheel, and in the home. It explains that amusement park operators can't afford to risk an accident. Their livelihood depends on safety. But, the film points out, everyone's livelihood depends on safety. And each of us can make accident prevention our business too by observing simple safety rules, weeding out hazards, and not taking foolish chances.

Selling safety with the speed of the "Flying Turns," Safe As You Make It has appeal for kids from 6 to 60. Running time, 10 minutes.

New Data Sheet

Data sheet D-206, Oxides of Nitrogen, is now available. The data sheet covers the sources and hazards of the five oxides and how to detect them. How to handle the nitrous fumes and first aid treatment is also included.

Accident Facts

The 1953 edition of Accident Facts has the answers to your questions on accident statistics.

Facts and figures on any type of accident—industrial, traffic, home, farm or school—are at your fingertips. The 96-page book is an invaluable source of ideas and data for making speeches, writing articles, preparing reports and planning safety campaigns.

Twenty pages of the book are devoted exclusively to occupational accidents, and provide the factual background necessary to give direction to an industrial safety program. There is a detailed list of accident rates by major industry groups, as well as charts showing the accident trend during the past 25 years. Commonest source of injuries, part of body most frequently injured, off-the-job accident problems, unsafe acts and unsafe conditions contributing to permanent impairments and deaths, and other topics are included.



Operation Safety

More industrial employees are injured and killed in off-the-job accidents than at work, according to reports made to National Safety Council.

The increasing activity in industry to reduce these off-the-job accidents with an organized safety program, coupled with the fact that a majority of these accidents occur in traffic, makes the new fluorescent bumper strips which are being added to Operation Safety materials of special interest.

These bumper strips can be a valuable addition to any off-thejob accident prevention program, or to the company's fleet safety program. Four inches wide and 15 inches long, the strips are just the right size to show up effectively on the rear of any vehicle.

Strips are printed in fire orange fluorescent ink and black, making them easily the "brightest sayings" in safety. Their Day-Glo message pops out to attract the attention of motorists and pedestrians alike. Slogan on the first printing is "Stay Alert—Stay Alive." (For miniature reproduction, see page 98.)

The bumper strips are weatherresistant, and made to stick on any surface without moistening. Because of certain state laws governing colors of lights and reflectors on motor vehicles, the strips are recommended for use only on back bumpers.

Also, some industrial safety experts have recommended the strips for posting throughout the plant because of the general application of the slogan to all types of safety.

Space is provided for imprinting. If none is requested, the imprinting space will carry the Green Cross emblem,

Available now, unimprinted copies may be obtained at the following prices:

| 1 | to | 9 copies | \$.20 | eacl |
|-----|----|-------------|-------|------|
| 10 | to | 99 copies | .15 | eacl |
| 100 | to | 999 copies | .12 | eacl |
| 000 | OF | more copies | .11 | eacl |

An additional charge will be made for imprinting.

For further information on the bumper strips and a sample strip, write Operation Safety, National Safety Council, 425 North Michigan Avenue, Chicago 11, Illinois.

Look to this page each month for latest news about NSC services. Address requests for additional information, samples or prices to the Membership Department.

Cleaner Air Simplifies Air Conditioning

The successful war on air pollution is resulting in easier air conditioning, from the architect's standpoint. Cleaner incoming air, due to improved methods of purification, means only enough outdoor air is now needed to avoid objectionable carbon-dioxide concentration. The result will be reduced sizes of boilers, refrigerating equipment and ductwork.

This was brought out by Norman Sharpe, head of the Air Conditioning and Refrigeration Department, California State Polytechnic College, San Luis Obispo, at the recent semi-annual meeting of The American Society of Mechanical Engineers in Los Angeles.

Suitable methods have been devised for removing nearly all objectionable pollens, smoke and atmospheric dusts with accompanying bacteria and odors. Improved dry filters, electronic precipitators, and activated carbon

adsorbers play important parts in complete air purification, he said.

Using purified recirculated air. rather than outdoor air for ventilation, not only eliminates the nonrecoverable loss of cooling outdoor air to room condition, but also enables the engineer to design the system for maintaining lower relative humidity in the rooms, with consequently smaller quantities of air and smaller-sized ducts to bring it in.

Studies have disclosed that in the ordinary quiet respiration of human beings no volatile poisonous matter is in the expired air. other than carbon dioxide. The air expired from the lungs has no odor. Bad breath is often caused by unclean mouth and teeth conditions. Odor, mainly body odor, has considerable effect on comfort of people in the room. Air in an occupied room is contaminated by many sources besides the expired air of occupants. These contaminants are in the form of minute particles of dust. Tests in a hospital room showed that this dust (which could be removed by a filter) contained micro-organisms, including some bacteria which produce inflammation.

The concentration of carbon dioxide and diminution of oxygen, found in crowded, poorly ventilated churches, schools, theaters and barracks, is not great enough to account for the discomfort produced in many persons. Neither is such discomfort caused by bacteria nor, usually, dusts of any kind. The main causes are excessive temperature, humidity and unpleasant odors.

In most buildings the normal infiltration leakage of air provides enough oxygen to keep the carbon dioxide concentration at a sufficiently low level. In tightly insulated buildings two cubic feet per minute of outside air per person. depending on their activity, is

sufficient.

Tobacco smoke presents a greater problem than body odor. About 25 cubic feet of outdoor



For demonstration, visit Booth 58, National Safety Congress, October 19-23, Chicago.



"Few things in America contribute more importantly to national security than the Payroll Savings Plan—the vehicle through which millions of employed men and women build security, counteract inflation and create a reserve of future purchasing power by their monthly investment in U. S. Savings Bonds. Credit for this outstanding influence in our lives is due largely to a team that is typically American... far-sighted business executives who have made the Payroll Savings Plan available to the employees of 45,000 companies...8,000,000 Payroll Savers... publishers of more than 500 business magazines and the management of the other advertising media who contribute generously of their space and time... the Advertising Council and advertising agencies who give freely of their skills. To these and to all who have a part in building the Payroll Savings Plan, the U. S. Treasury Department welcomes this opportunity to say, "Well done, America."

Do you know-

- on May 1, 1953, the cash value of Series E Bonds outstanding—the kind bought by Payroll Savers—reached a new record high—\$35.5 billion—\$1 billion more than the value of E Bonds held on May 1, 1951, when E Bonds commenced to mature.
- cash sales of Savings Bonds, all series, during the first four months of 1953 totaled \$1,741,273,000-22% above those of the first four months of 1952.
- of the approximately \$6.7 billion E Bonds which had come due up to the end of April, 1953, \$5.1 billion, or 75% were retained by their owners beyond maturity.
- every month, nearly 8,000,000 Payroll Savers purchase about \$160,000,000 in Series E Bonds.

For assistance in installing a Payroll Savings Plan, or building participation in an existing Plan, write to Savings Bond Division, U. S. Treasury Department, Suite 700, Washington Building, Washington, D. C.

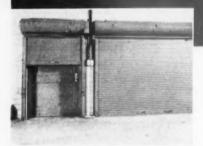
The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

NATIONAL SAFETY COUNCIL



Get the safe, automatic protection of AKBAR FIRE DOORS

Made only by the makers of Kinnear Rolling Doors





They stop fire in its tracks

You can rest assured of positive, automatic, safe fire protection at windows, doorways or other openings equipped with famous AKBAR Rolling Fire Doors.

Approved and labeled by Underwriters' Laboratories, they combat fire loss by closing automatically, cutting off dangerous drafts, blocking the spread of flames, and confining fires to smaller areas.

When fire threatens, Akhar Doors are pushed downward by a strong starting spring, to assure quick, positive action.

Yet, downward speed of the doors is controlled by a special safety device, to protect anyone passing underneath as the doors close. Doors can also be opened after automatic closure, for emergency exits.

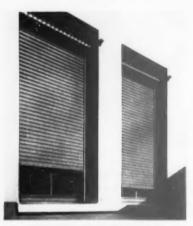
Another Kinnear safety feature prevents the steel curtain from pulling loose at top or dropping below the sill, if the floor is weakened by fire.

Akbar Fire Doors remain coiled above the opening, completely out of the way. In many cases, they're completely hidden from view. They can also be used in regular, daily service operation, and can be equipped for motor operation if desired. (Where maximum fire protection is not essential, non-labeled Kinnear Rolling Doors are prefetred.)

The Kinnear AKBAR Fire Door is available in any size. Write for complete details.

The KINNEAR Mfg. Co.
1720-40 Fields Ave. . . Columbus 16, Ohio
1742 Yesemite Ave. San Francisco 24, Calif.
Offices and Agents in All Principal Cities.

at DOORWAYS



WINDOWS



CORRIDORS



air per minute per person is required where smoking is allowed, while 12 may be enough to control body odor in ventilation.

The effect of air pollution on general health of people in industrial districts is largely a matter of speculation. Pollutants vary from time to time in a given community. Normally the atmosphere does not become sufficiently polluted to cause distress, but in foggy weather, during periods of low air velocity, or during periods of temperature inversion in the atmosphere, the accumulation may become so great as to cause irritation of the eyes or respiratory passages and even death to those afflicted with respiratory or heart ailments.

Purity of indoor air is maintained by removing the pollutant at its source and by diluting the indoor air with cleaned outdoor or recirculated air. Usually a combination of devices such as filters, electronic precipitators, adsorbers and air washers are needed for good air purification.

Appointed to Dusts and Gases Committee

HERBERT E. STOKINGER of Cincinnati has been appointed liaison representative to the Committee on Allowable Concentrations of Toxic Dusts and Gases of the American Standards Association.

Mr. Stokinger, chief toxicologist of the Chief Occupational Health Field Headquarters, U.S. Public Health Service in Cincinnati will have as his alternate, Dr. W. CLARK COOPER, also associated with the Health Field Headquarters, as medical director.

This ASA committee deals with the determination of the allowable concentration limits of harmful substances such as gases, vapors, and fumes in the atmosphere of working places, from the viewpoint of occupational disease prevention. Up to the present time, this committee has approved the maximum allowable concentrations for about 17 or 18 substances. The standards have been set up on the basis that an employee should be able to work in that concentration eight hours a day continuously, without harmful effects.

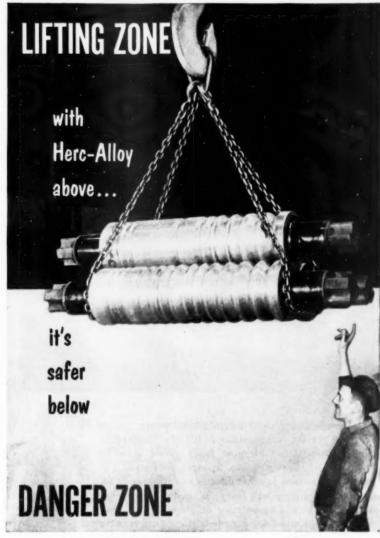
Heat-Resisting Suit Cuts Shut Down Time

A \$160 protective suit saves hours of cylinder production time and guards against spoiled "heats" at Walter Kidde & Company Inc.'s Belleville (N.J.) plant. Used in conjunction with a huge gas furnace which continuously heat treats and degreases fire extinguisher cylinders, the outfit permits the man to work between the two tunnels of the furnace and to make necessary adjustments at temperatures up to 400° F. for as long as 45 minutes.

Formerly, when furnace controls needed adjustment, the furnace was secured and took two days to cool sufficiently for men to enter the control area and work for a maximum of 30 seconds, Now, production continues uninterrupted during adjustments and the worker is not subjected to extreme heats or carbon monoxide gas.

The suit was developed jointly by the Kidde safety department and the Guardian Safety Equipment Co. of East Orange, N. J. It has six basic parts: hood, mask. suit, gloves, shoes, and air purifier. The suit and hood are made of a pliable, herringbone-type fabric coated with aluminum paint which reflects 90 per cent of heat. The gloves resist heat to 1600° F. and the shoes are of asbestos. Fresh air is supplied by an air purifier and pressure reducer connected into the plant's compressed air line and is fed to the wide vision, compressed air mask worn by the man.





SPECIFY

MERE ALLOY

SLING CHAINS



Write for Data Book

HERC-ALLOY

Sling Chains are registered by individual serial number and can be rebuilt or replaced at any time to original specifications. The Allegheny Ludlum Steel Corp., pictured above, uses Herc-Alloy Sling Chains for hundreds of tough lifting jobs in its plants. In addition to maximum safety, Allegheny Ludlum also enjoys the extra economy of longer-lasting Herc-Alloy. These sling chains offer still another advantage...a weight reduction unmatched by any other alloy chain without any sacrifice in tensile strength. This reduces worker fatigue. All things considered, don't you think Herc-Alloy Sling Chains are worth a try in your plant.



COLUMBUS McKINNON

CHAIN CORPORATION

TONAWANDA, NEW YORK DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND Every day more and more factory men tell us -

Tokheim hand pumps are safer, faster, more useful!



This new Tokheim double-action hand pump has no equal for speedy, safe handling of liquids. Delivers 20 gallons per minute of most fluids. Stops wasteful dripping and slippery floors. Reduces fire hazard and accidents common to other methods of transfer. With optional diaphragm and body, it handles a wide variety of products. Compare list below with your own needs. UL-approved for petroleum liquids. Available in hose and spout models—for drums, skid tanks and underground installations. Call your dealer, your Tokheim representative, or write the factory for literature.



A Tokheim will handle a variety of liquids



Acetates • Alcohols • Aromatic & Chlorinated Solvents • Glycols • Ketones & Ethers • Petroleum Solvents • P'asticizers • Petroleum Products • Ammonia • Ammonia Hydroxide • Cutting Oils Flushing Oils • Lacquer Thinners • Anti-Freezes Castor oil • Caustic Soda Solution • Freon • Glycerine • Turpentine • Water • Wood & Vegetable Oils.

General Products Division

TOKHEIM OIL TANK AND PUMP COMPANY

DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901 1670 WABASH AVENUE, FORT WAYNE 1, INDIANA

Factory Branch: 1309 Howard Street, San Francisco 3, California

Plan Machine Guards For Taller Men

An American Standard safety code just revised recognizes that men of today are taller. Incorporating the most modern safety practices for the protection of operators of power machinery, it now requires the guarding all transmission equipment to minimum heights of 7 feet.

Realization of the need for guarding machinery to greater heights came about during the last war. Practices have gradually changed accordingly, and the revised code brings requirements into line with them. Previous editions of American Standard Safety Code for Mechanical Power-Transmission Apparatus B-15.I-1953 provided that transmission equipment be guarded to minimum heights varying from 5 feet 6 inches to 6 feet 6 inches.

For the first time, safety requirements for V-pulleys and V-belt drives are included in the code's recommendations. This is in recognition of the newest methods of power transmission.

The code, one of the most fundamental in the whole safety movement, deals with guarding of all revolving and reciprocating parts of equipment used in transmission of power. Included for example, are guarding requirements for shafting, pulleys, belts, chains, gears, sprockets, couplings, clutches and counter-weights.

Minor changes in the definitions of requirements are included in the revised edition.

Guarding of hazardous parts of mechanical power apparatus has been one of the most vigorously approached problems in industrial accident prevention work, and since 1927 this American Standard has provided standard methods for such guarding operations. This development has led to a significant decrease in the one-time heavy toll of crippling accidents from the operation of power-driven machines.

Guarding of machinery at the source of manufacture has lagged because of lack of uniformity in nationwide requirements. Incorporation of guards at the design stage, made increasingly possible as local regulations are brought into conformity with the code, has

these advantages—it results in better design, lower costs of guard installation, and enables purchasers of equipment to specify compliance with code requirements in purchase specifications.

The code is intended as a guide to the producers of machinery, to enable them to incorporate guarding in design and manufacture of equipment: as a guide to the purchaser and user of machinery, to facilitate drawing up purchase specifications: and for adoption by state regulatory authorities concerned with industrial accidents. Many regulatory bodies have included the previous edition in their codes and recommendations.

Their Night To 'Owl

The National Safety Council is called upon to answer a great variety of questions, but here's one that's "strictly for the birds." A New Orleans box plant has requested assistance in locating a covey of decoy owls, to discourage squatter sparrows that tenant plant eaves. One of the bosses would like to send the sparrows back to Capistrano because they persist in making deposits on his car—and he doesn't want to sell.

The sparrows constitute a definite fire hazard, since it is reported they are chain smokers. They are a little too small to handle the longer cigarettes, but damage is feared from their "Prince-Size" brand.

The member was given a list of manufacturers of papier-maché birds and a report on the results is awaited with interest.

The "Thrill" Is Gone So Bill Moves On

People usually book passage on amusement park rides strictly for enjoyment, but to William Olsen of Brooklyn, N.Y., it was all in a day's work.

Olsen recently changed his job, but for nearly 20 years he was an inspector of amusement rides at Coney Island.

It was his duty to test the safety of "thrill" devices such as roller coasters, parachute jumps, carousels and "tunnels of love,"

Olsen estimated that he entered



... Then **ALGRIP** Banished Slipping Accidents and Pared the Company's High Insurance Rates!

Take a machine tool, surround it with oil-filmed flooring, and you've set the stage for a tragedy. This one—in a southern industrial plant—cost a skilled workman his arm. ELIMINATED:
Crippling accidents that slashed production.

SAVED:
Lost man-hours and high insur-ance premiums.

Then we installed A.W. ALGRIP Abrasive Rolled Steel
Floor Plate. Result: No more slipping accidents! For tough abrasive
"grinding-wheel" grain, rolled deeply and densely into steel plate,
makes ALGRIP truly non-skid. It's almost impossible to slip on this
hard-gripping floor plate—even when it's wet or oily—even on steep
inclines!

Benefit: A three-way saving . . . (1) No more costly, crippling accidents. (2) More efficient work and better production. (3) A substantial reduction of workmen's compensation insurance premiums—substantial enough, in fact, to pay for the cost of the ALGRIP installation!

End Slipping Accidents that Cripple Men and Production and Kite Insurance Premiums.

A.W. ALGRIP—only abrasive rolled steel floor plate in the world—pays for itself in savings from safety. Get the full ALGRIP story today; write for our new Booklet AL-14—without obligation.

Over 125 Years of Iron and Steel Making Experience

ALGRIP Abrasive Rolled Steel Floor Plate
ALAN WOOD STEEL COMPANY
CONSHONOCKEN, PA.
Other Products. A.W. SUPER-DIAMOND Floor Plate • Sheet • Strip
(Alloy and Special Grades)

There's a big difference

in floor absorbents



You, too, can witness the difference in floor absorbents! With his portable laboratory, your Eagle-Picher man will analyze your floor absorbent *right in your office*. You may actually conduct the test yourself! Without obligation, of course.

Here's what the test shows-

- The amount of oil and water absorbed for given bulk.
- The cost of your absorbent in terms of absorption and coverage.
- The amount of coverage you're getting.
- The benefits of your absorbent in terms of safety and reflective ability.

You'll see that Eagle-Picher Floor-Dry is insoluble, chemically inert and non-combustible . . . that it combines light weight for exceptional coverage with light color for brighter, safer working areas. Write today for the full story.



EAGLE-PICHER INDUSTRIAL FLOOR-DRY No. 85

E PICHER

THE EAGLE-PICHER COMPANY

General offices: Cincinnati (1), Ohio

such tunnels more times and exited with less lipstick on his collar than any man in history.

"Everybody would come out giggling and screaming—and I'd come out making notes," he said. The notes concerned the safety factors of the ride, and not the activities of passengers, according to Bill.

He also found rides for children embarrassing. Olsen had to spend hours perched on miniature horses and rocket planes designed for tots.

"Never got sick on any of them,"
Olsen said, "Just bored."

When Olsen left Coney Island he remained with the Brooklyn department of housing and buildings. They transferred Bill from amusement park inspection to elevator inspector.

"The motion is kind of relaxing," he said.

Announce New Standard For Hearing Aids

A new American Standard Method for Measurement of Characteristics of Hearing Aids, 724.14-1953, just released, will enable manufacturers to offer the public hearing aids best suited to individual cases of hearing loss. The standard will make it possible for both manufacturers and laboratories to accurately test, measure and compare hearing aid products.

Information released by the manufacturer based on these tests will give the hearing aid retailer specific information to determine whether a hearing aid meets the needs of the person being fitted.

The present standard is limited to the measurement of air-conduction vacuum-tube hearing aids. It has not yet been found possible to properly standardize measurements on bone conduction receivers. The standard can be made applicable, however, to transistortype hearing aids, which are rapidly coming into the picture. Some authorities believe it is possible that within a year most hearing aids will be either all transistor or partly transistor.

The standard includes a provision for measuring "saturation output" of hearing aids. Saturation output is of particular interest in selection of a hearing aid because it indicates whether the hearing aid might produce soundpressure levels that could be considered uncomfortable or dangerous to the ear of a particular individual.

The saturation output is also closely related to the power the hearing aid will deliver. It is, therefore, a good indicator of whether the hearing aid will deliver enough output sound pressure to meet individual requirements.

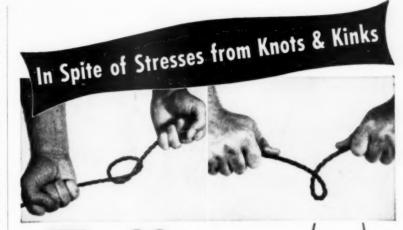
A specification has been provided for measuring harmonic distortion of the hearing aid, and another for measurement of the effects of tone control changes on basic frequency response. Information is also given on battery drain and the effect of battery voltages.

Warehouses Suffer Heavy Fire Losses

That warehouses are currently sustaining the largest average loss per fire in any class of industry was the observation of J. T. W. Babcock of the Factory Insurance Association of Chicago, before the 57th Annual Meeting of the National Fire Protection Association in Chicago.

Mr. Babcock also observed that "the fact that warehouse space is scarce in practically every part of the country not only makes these warehouse fire losses important from the loss of dollar values and the loss of the storage space, but contributes further to the mounting loss record forcing concerns to use undesirable and unsafe warehousing space."

"The efficiency of warehouse operations depends on many features, one of which is utilizing the maximum cubic volume of a building most effectively. The development of the fork lift industrial truck has been of great value to warehousemen in maintaining this high level of storage, but probably has also been the indirect cause of the high fire losses because of the necessity of wood box pallets, dunnage and crates creating just the right air space and passages to permit rapid and maximum temperature fires to consume the material in the shortest time." The conversion of the gasoline engine driven tractor to the liquefied



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Knot it! Kink it—if you can! See how easily the patented braided construction of Tuffy Slings straightens out without damage. Only Tuffy gives you this extra flexibility and long-life strength—because ONLY TUFFY has this 9 part machine-braided wire fabric construction that fights off knots and kinks, yet stands up longer when such stresses of distortion happen. Mail coupon for your FREE 3-ft. sample of Tuffy Sling fabric and test it yourself!

A Steel Company Reports: "...outlasted former slings 3 and 4 to one."

One month's service was tops—until Tuffy showed how they could get 3 and 4 times longer service—at big savings on sling costs.

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Stop Doing It The Old Fashioned Way

Protect those who are using dangerous, ald fashioned hand, dangerous, ald fashioned hand, foot and bar methods of closing foot and foot and constant in the constant in t

petroleum fuelled equipment which introduces the hazard of the liquefied petroleum storage plant into the concentrated values of the warehouse is another factor in "Stockpiling for Destruction," said Mr. Babcock.

R. C. Corson of the Factory Mutual Engineering Division, Boston, Mass., discussed the significance of fire loading. Said Corson: "Where the intended or existing occupancy of a building is known it is possible to design the structural elements, floors, walls, roofs, subdividing walls and partitions to safely withstand without collapse the expected severity and duration of a fire based upon the fire load, which is the expected maximum amount of material constituting the building construction and its contents, available to burn in any one fire. Fire loading is a significant factor affecting the resistance of buildings to withstand without collapse the maximum fire conditions likely to occur."

Accidents Decrease as Air Travel Grows

Cost in lives and property has decreased sharply despite rapid expansion of air transportation, Ben W. Ashmead, chief of the Analysis Division, Bureau of Safety Investigation, U. S. Civil Aeronautics Board, told The American Society of Mechanical Engineers. In his address, Mr. Ashmead presented statistics on progress in air safety over the past 25 years.

The Bureau is responsible, under federal statute, for investigation, analysis, and determination of probable cause or causes of each accident in U. S. civil flying, and for recommendations to prevent their recurrence.

"Public acceptance of competitive public services offers a true gauge of the safety and value of those services," Mr. Ashmead asserted, pointing out they had first served about six million passengers in 1915, practically doubled this figure in the following year and more than quadrupled it in 1952.

The growth in domestic scheduled operations has been from six million plane miles and 8,600 passengers in 1927, to the 1952 total of 445 million plane miles, 13

billion passenger miles, and 25 million passengers.

"Statistics show from the safety standpoint that plane miles flown per accident have registered a constant increase. In 1952 the figure was 22 times the annual average recorded from 1927 to 1938. Also, the number of passengers flown safely per each passenger fatality in 1952 was 20 times the corresponding figure for the 1927-1938 period," he said.

To answer the public's question of "What are his chances of survival?" the index of "Passenger Fatality Rate Per 100 Million Passenger Miles" is accepted here and abroad throughout the transportation world for this purpose.

"In 1952, more than 12 million plane miles were flown per accident, 89 million per fatal accident, 9.5 million per passenger fatality, 74 million per crew fatality, and, of 25 million passengers flown, 46 received fatal injuries." Mr. Ashmead stated.

Non-scheduled operators gained impetus following World War II. he added. Rigid safety factors required for scheduled carriers under Civil Air Regulations, and enforcement procedures of the Civil Aeronautics administration, were less restrictive to the non-scheduled. Now, safety requirements of "irregulars" are more like those of the scheduled, with the result that safety of operations has improved considerably. In 1948 the passenger fatality rate per 100 million passenger miles was 18.7. In 1952 it was only 2.0, Mr. Ashmead reported.

In regard to non-air carriers, Mr. Ashmead said that since 1927 (the first year authoritative statistics were available, under the Air Commerce Act) more than 30 thousand accidents resulting in death to more than 10 thousand persons, have been recorded. The highest number of accidents recorded in any single year was 9,250 in 1917. Of these, 882 involved fatalities and close to 1400 persons were killed.

"In 1927 the certified pilot total was 1600. The Bureau of Air Commerce in that year issued close to 500 student certificates. In 1947 the certificated pilot total reached nearly one-half million, and the Civil Aeronautics Administration



Zorball another helpful Wyandotte Chemicals product at work

Only ZORBALL (of all absorbents) brings you these extra benefits

I MAGINE the lasting safety, reduced cost and improved "housekeeping" that will come your way with these three outstanding features of all-purpose Wyandotte ZORBALL:

First, Zorball (a different absorbent made only by Wyandotte) does not eake or break down to dust. Nor can it be tracked all over your plant.

Lasts longer, cuts costs

Second, Zorball continues to be skidproof even after absorbing saturation quantities of oil, paints, fats, chemicals or water. This continued effectiveness means longerlasting protection against slipping and skidding accidents. Third, ZORBALL can be swept up easily, in just half the time it takes to sweep or scrape away absorbing materials that become soft, sticky, greasy. And, after drying out, it can often be used over again!

Ask your Wyandotte representative to show you how Zorball keeps floors safe longer . . . and reduces absorbent costs. He will also give you information about other Wyandotte products designed for better cleaning and maintenance. Wyandotte Chemi-

CLEANING THE WORLD cals Corporation, Wyandotte, Michigan; also Los Angeles 54, California.

Largest manufacturers of specialized cleaning products for business and industry



Helpful service representatives in 13s cities in the United States and Canada

issued 200 thousand student certificates in that year," he said.

In the past several years there has been a definite increase in aircraft use for industrial and business purposes. "We now have the flying farmer, lawyer, salesman, doctor, the flying executive, and the aerial applicator conducting such activities as crop and pest control, seeding and fertilizing.

"Since 1938 there have been safety gains in this field.

"The fatal accident rate per 100 pilots in 1949 was 0.11 against 0.80 in 1938. The fatal accident rate per 100 aircraft registered in 1951 was 0.47 against 1.63 in 1938," he said.

The business aircraft fleet of today has reached 10,000. More than 1800 of these are multi-engine. Business aircraft flew approximately 3,250,000 hours in 1952.

See Us in Chicago

From page 27

The reception for women will be held in the Blackstone Hotel ballroom on Tuesday, October 20, from 3:00 to 5:30 p.m. The Carol Lane Awards will be presented at 3:30 p.m. and a tea will follow the ceremony.

The Safety Exposition of 1953 will present the most elaborate and comprehensive display of safety equipment and related products yet shown. All exhibits will be housed in the Conrad Hilton, occupying the Exhibit Hall at the Lower Lobby Level and additional space on the Mezzanine and third floors.

Delegates who were able to make definite plans well in advance naturally fared best in hotel accommodations. Those who have not yet made reservations are urged to do so without delay. All inquiries should be addressed to Congress Housing Bureau, National Safety Council, 425 North Michigan Avenue, Chicago.

Well, this takes up all the space, with no room left to list Chicago's many charms. They are already well known to most prospective delegates and the booklets in hotel rooms will describe them in detail.





President's Medal

Awards made by the National Safety Council for successful application of artificial respiration

DENZEL F. BRAKE, chief engineer, City Utilities of Springfield, Springfield, Mo. electric shock. JOE WEEKS, serviceman first class, Kentucky Utilities Co., Princeton, Ky.-gas asphyxiation.

LEO S. DOUGHTY, painter, Portsmouth Naval Shipyard, Long Island, Me.-drowning.

LLOYD B. DOUGLASS, transmission man, American Tel. & Tel. Co., Milton, Mass.-drowning.

ALVIN L. LEWIS, operator. Northern Natural Gas Co., White Deer, Tex.-electric shock.

Douglas C. Smith, electrician, Stanley G. Flagg & Co., Inc., Douglassville, Pa.-electric shock. Mrs. Joe Bowen, housewife, Chanute, Kan .- drowning.

FRANK E. ALEXANDER, head roustabout. The Texas Company. Byron, Wyo.-gas asphyxiation.

Crossings Eliminated

From page 72

over this track between 5:00 a.m. and 11:00 p.m., that no bells be rung nor whistles blown, and that flagmen be placed at each crossing. Later, restrictions as to time of movement were removed by another ordinance and trains began to block morning and evening traffic along six streets.

Both the city and the Missouri Pacific were unhappy about the delays and hazards at these crossings. Plans to separate the grades were complicated by various other construction projects, such as the MacArthur Bridge, the projected River Font Memorial, and the Third Street Trafficway.

Discussions were undertaken between the Missouri Pacific, the City of St. Louis, the Missouri Highway Department, U. S. Bureau of Public Roads, and the Terminal Railroad Association of St. Louis. The result was the plan to build an entirely new elevated route from Seventh Street to the Missouri Pacific Lesperance Street

It Pays to Modernize



Get Low Cost Dust Protection With

COLLECTORS

Everywhere, cost conscious plant managers are modernizing production set ups with Torit Dust Collectors for, in addition to their known efficiency, they produce savings all along the line. Among these are:

- · Low investment and installation expense.
- Minimum piping for less friction loss
- Can be wired to eliminate idle operation.
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- Self-contained they occupy little space.
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our unalog in Join this modernization parade by increasing your plant's efficiency with Torit Dust Collectors. For complete information write:

DOOR FASTENERS

The sturdy and efficient door fastener used on Torit cabinets is available for use o your own products. Strike plate either flat or angular. Write for quantity prices.

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TORIT DUST COLLECTORS Now in Operation

Get some more light on SAFETY with this smart KEY CHAIN FLASHLIGHT



| | | | PRICES | | | | |
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| | A | A | A | 8 | 8 | C | D |
| Quantity | 100 | 250 | 500 | 1900 | 2500 | 5000 | 10000 |
| Each | .42 | .41 | .40 | .33 | .311/2 | .281/2 | .251/2 |

Call in your local Advertising Jobber or Agency to see samples.

For complete catalogue, write to Att: Mr. A. Auchen - Premium Dept.



Saves Job Time

Du Pont "PRO-TEK" acts like an invisible work glove

Protect workers' hands—reduce time costs with Du Pont "PRO-TEK." This hand cream shields the skin against grease, grime, paint and insoluble cutting oils. It's easily rubbed on hands and arms by workers before starting the job. At washup time, "PRO-TEK" washes off quickly, cleanly with plain water-takes all the grime along. It saves job time . . . maintains production efficiency . . . and boosts morale.

Contact your supplier now for Du Pont "PRO TEK." Or write to E. I. du Pont de Nemours & Co. (Inc.). Wilmington 98, Del.





HAND PROTECTIVE CREAM

DAY-SON GENUINE SELF-SEALING CORK BULLETIN BOARDS

The bulletin board that lasts and lasts Insist on Dav-Son genuine self-sealing cork—tack holes disappear. Natural finish hardwood frames with mitered, glued corners add to long life of Day-Son bulletin boards. Sizes from 12x18 and larger, with or without locking glass doors. \$4.15 up.

larger, with or without locking glass doors. 34-15 up.

Also with metal frames for inside or outside use,
Dav-Son Safety Director with
color, light, motion, easy changeable letters for up-to-minute messages, peak attention.
\$39.75, letters incl.
A Dav-Son board for every purpose. Over 100 different sizes and
styles to choose from.
Dealer Inquiries Invited.

If your dealer doesn't have the Dav-Son board you need write direct.

A. C. DAVENPORT & SON, Inc., Dept. NSN. 311 N. DESPLAINES STREET . CHICAGO 6, ILLINOIS



Yard. The mile-long concrete and steel viaduct cost \$1,250,000.

Opening of the new elevated line was an important civic event. It was commemorated by the operation of a special train carrying two flat cars equipped with benches and two diners in which luncheon was served. The train left the Union Station at 11:30 a.m. and was the last to operate on Poplar Street.

Aboard the train were state, national and city officials: representatives of historical societies: traffic experts, civic leaders and railroad representatives.

At Third and Poplar a brief track removal ceremony was held. Addresses were made by Missouri Pacific's chief executive officer, P. J. Neff, and St. Louis Mayor. Raymond R. Tucker, after which a crane removed a section of the track.

Small Plants From page 31

Congress

Attendance at the National Safety Congress helps executives from the smaller local companies and those interested in association safety work, and the Proceedings give help on a broader scale. Safety know-how exchange meetings were held at the Greater New York Safety Conference and many other regional conferences featured safety in small business sessions. Members of our Small Business Committee and the staff participated in most of them.

Consultation

Consultation has been freely given without obligation. Some companies and associations have launched successful programs after receiving such help; others may become active later.

Award

The Association Award, started in 1952, is creating even more interest in 1953. Eleven associations have qualified for the 1953. Award; seven did not even though their activities were noteworthy. The publicity from these awards will help the associations, their members and the Council but. equally important, is the knowledge gained by our Committee of association activities which can be passed on to other groups in the future.

Our Score

Safety in small business is probably one of the most talked-about subjects in the field of industrial safety. The President's Conferences stressed it and nationally known organizations such as the American Medical Association, National Association of Manufacturers, Chamber of Commerce of the United States and the American Trade Association Executives are active in the field.

Other business groups, such as Smaller Business of America, Incorporated and local or state manufacturing associations have given special attention to safety in small business through conferences and their publications. Nationally known magazines such as Factory Management and Maintenance, Dun's Review and Modern Industry, and the Kiplinger Letter have publicized our program or have devoted a considerable amount of space to articles and items on the subject

The extent and success of our efforts to reach other organizations are evidenced by the following:

- 58 associations started or expanded their safety programs since July 1951. Approximately 71,000 individual companies are reached through 39 trade associations on which we have membership data.
- 79 associations were given personal or special consultation.
- 55 new association members (an increase of 50%)—to a total of 162.

23 talks made at association conventions or safety meetings.

38 talks made at local safety conferences and other local meetings. Approximately 45,000 promotional booklets, Safety Pays the Smaller Business were distributed by insurance companies, trade associations and local safety councils.

We Are Learning

There has been a great deal of trial and, admittedly, some error in the past two years. But we are learning what works and what doesn't work and we are passing that information on to others who can profit by the experience of our Small Business and Associations Committee. For instance, here are some rather general observations—some are not new but they consolve.



When it comes to getting men off the ground safely you'll do better for them (and for yourself) with "Gold Medal" equipment.

Next time you're buying, compare... we'll be glad to show you why thousands of painting contractors insist on "Gold Medal" ladders and scaffolds... because they're made better to last longer and cut costs. And remember, you get the right equipment for any job because we have all types—made better to save you money.

Ladders -- Wood and Magnesium * Scaffolds - Ladder, Rolling or Fixed in Steel and Aluminum * Swinging Scaffolds in Steel or Aluminum * Trestles --Common, Extension and Adjustable Steel * Stages * Extension Planks * Ladder Jacks * Ladder and Scaffolding Accessories



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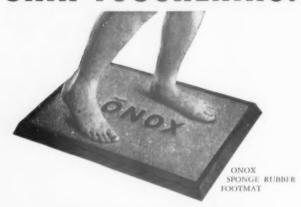
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Used by Over 70% of the Largest Industries in the United States

No splash • No mess • No waste • Odorless

Easy to maintain • Nothing to get out of order

Men like Onox • It relieves tired, aching feet

Modern research has upset the old theories about Athlete's Foot control. Skin specialists now say that the best chance of preventing Athlete's Foot is to improve the condition of the skin. That's what Onox does. Onox mineral salts toughen the skin and make it resistant to fungus growth. No fungus growth—no Athlete's Foot.

60 DAY TRIAL OFFER

We will ship prepaid your trial order for any amount of Onox and footmats. You pay nothing unless fully satisfied after 60 days' use.

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Weathertite ADMITTANCE THE (DANGER) TO TOILET MEN 1 -NO -PARK WORKING POSITIVELY ABOVE ADMITTANCE NO LEF **FURN** Write for Catalog PRODUCT

firm our previous impressions.

It is possible to get fair attendance of small company owners at a safety conference, but an unusual amount of promotional effort must be expended. This conclusion should not be too startling. This situation can be improved if all who arrange "small business" sessions at local conferences, know the nature of their audience and gear subjects and speakers to the specific problem. On the other hand, small company owners do attend their own local association meetings or trade association conventions and we have successfully reached large groups this way.

The lack of statistics on accident costs in small business and the lack of better information on the relationship between safety and public relations or employee relations is a real handicap. Most available information is prepared by and for the large corporations and is not suitable for the small lumber yard or dry cleaner who very infrequently has an employee injured seriously enough to need help from the general practitioner serving the neighborhood.

There is a need to get more information but, first, some means must be found to "educate" the lumber yard manager to maintain at least the basic records. The National Safety Council and other cooperating agencies cannot develop much-needed smaller company safety statistics and other data until they can extract more information from the original source—the small company itself.

Our plans for the future call for an expansion of our more successful activities and for the start of some new ones. More very brief promotional material will be prepared, more statistics will be developed and publicized and more help will be offered on an industrywide basis. Consultation and very short safety training courses will be offered. We may be only throwing pebbles into an ocean but we believe that each pebble will create an ever expanding ripple. It is too early to see any over-all picture of improved experience, but we are confident that the program is on a sound basis and that success is merely a matter of time.

Industrial Health

-From page 42

the last few years. Today several professional societies have committees on noise and hearing and a number of universities have specific departments devoted to the study of hearing and of noise.

Great Britain was quite active in noise research in the early thirties and has published a good deal of their work.

Industrial noise in the near future is probably going to make greater headlines than either the phosphorus matches or the silicosis cases. "It is up to industry whether those headlines will spell trouble or even disaster for many companies or whether there will be a banner proclaiming the fact that management really is deeply concerned with providing healthful working conditions for its greatest assets . . . the men and women in its plants."

Medical Care Plan

United Mine Workers of America Welfare and Retirement Fund Medical Care Program, by Warren F. Draper. The American Journal of Public Health 43:757-762 (June 1953).

THIS MEDICAL CARE program is available to approximately one and one-half million potential beneficiaries consisting of miners and the dependent members of their families and dependents of deceased miners. The potential beneficiaries are located in 24 states and in the Territory of Alaska. The program has been in operation for a little more than 33 months.

The program provides for hospital care, primarily in existing hospitals of the area where the care is provided. Medical care in the hospital and specialist service outside the hospital where necessary. Rehabilitation service at special centers for this purpose. Drugs in the hospital and some drugs outside the hospital. Physical examinations under certain conditions and home and office care for severely handicapped individuals.

The Fund does not provide any services which the patient is entitled to receive from other agencies, particularly agencies of the government, or services for which some other party is legally responsible. Also it does not provide

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clean goggles faster-better-safer!



Why let your employees take chances with dirty, scratchy cloths—used over and over again? Kimwipes industrial wiping tissues clean goggles and face shields far better because they're used only once, yet are no more expensive to use.

These clean, soft, absorbent tissues are 100% free of abrasive matter. Absorb up to 8 times their own weight in liquids. And Kimwipes are dispensed in handy "one at a time" packages that can be located at several spots in your plant.

You'll find dozens of other uses, too, from wiping up spilled liquids to precision polishing and inspection wiping. Try a few boxes soon and see if you haven't found the all-purpose wiping material you've always needed.



Two tissue sizes, 15" x 18" and 5" x 9". For information, write to Kimberly-Clark Corporation, Neenah, Wisconsin.

A Product of Kimberly-Clark



Roomy garment made of fine chrome split leather, tanned for heat resistance and pliable. Detachable bib. Riveted at all points of strain.

SIZES:

SMALL MEDIUM LARGE

For Further Details Write

ALJAY MANUFACTURING CO., Inc.

1516 CALLOWHILL ST.

PHILADELPHIA 30, PA.

dentistry, removal of tonsils and adenoids or long continued treatment for mental illnesses.

For eight months there was an experiment in providing home and office care in addition to hospital care, but it proved unsatisfactory and was discontinued.

Since the Fund has been in operation, about 2100 hospitals have cared for some of the patients and 3,000 physicians have been paid for services rendered to

beneficiaries of the Fund.

One of the guiding principles of the Fund has been to keep the development and operation of the medical care program in the hands of physicians. This program is administered through ten area offices, each in charge of a physician who is an experienced medical care administrator and who is directly responsible for the activities within his specified area. General direction and supervision is in the hands of the general medical executive officer stationed at the headquarters in Washington.

Each area office has provision on its staff for a public health nurse and for one or two medical consultants on rehabilitation programs.

Up to the present the Fund has used existing hospitals. The representatives of the area offices arrange with the hospitals individually for services which are to be provided. Representatives also arrange terms upon which services are to be provided. Only hospitals which have come to an agreement with the area office are used by the beneficiaries of the Fund. Exceptions may be made in cases of extreme emergency. All bills for medical and hospital service are certified by the area office and paid by the central office in Washington.

In some areas there are no hospitals available and in others the hospital services have been unsatisfactory. When the services are unsatisfactory or the charges



Are You Fully Protecting the Feet of Your Employees?

"SANKEY" IMPROVED FOOT GUARD equipped with Anti Skid TOE CLIP.

"SANKEY" FOOT GUARDS consist essentially of a metal shield to be worn over the shoe whenever the foot is in danger of being either crushed or cut. The metal shield is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows. Write for literature or a trial pair.

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Combination Foot-Shin Guard



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In many cases Emalfon has replaced the asbestos glove at a big saving. Fine for extra warm welding jobs. If not available from your safety equipment dealer, write us for information and prices. Also-ask for literature on our complete line of safety gloves.

*Trade Mark Reg U. S. Pat 0ff.

SINGER GLOVE MFG. CO.

860 W. WEED ST. CHICAGO 22 Work Gloves That "Sing" are exorbitant, the area offices have gone to considerable effort to find an improvement. They have even transported the patients to other areas for treatment until they could come to agreeable terms with the local hospital.

In the areas where there are no hospitals and not enough medical service, the Fund has arranged for the building of hospitals. They have created the Memorial Hospital Association of Kentucky, the Memorial Hospital Association of Virginia and the Memorial Hospital Association of West Virginia. These are non-profit corporations organized under the laws of the particular state in which they are to operate. They are responsible for constructing, equipping and operating new hospitals at Harlin, Pikeville, Hazard, Middlesboro, Whitesburg and Wheelwright in Kentucky, at Wise in Virginia and at Beckley, Logan and Williamson in West Virginia.

Each of these hospital associations consists of a Board of Di-

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rectors who are employees of the central office of the Fund. Each Board of Directors provides a medical director and deputy medical director for its own hospitals. They are responsible to the Boards of Directors. These Memorial Hospitals will provide hospital care and facilities to members of the community who are not beneficiaries of the Fund after the needs of the beneficiaries of the Fund have been satisfied.

Most of the physicians in the area where the Fund operates take care of Fund beneficiaries and receive payment from the Fund. The only requirements are that the physician be in good professional repute, provide treatment at a reasonable price and submit the required clinical records and data. No physician in the area has been critical of the amount of paper work required to receive payment from the Fund.

In the few instances where Fund beneficiaries have received incompetent or exorbitant medical care, the area offices have taken steps to correct the conditions and toward this end a survey team has been appointed by the American Medical Association. The team visits some of the worst areas and makes recommendations to the governing Boards of the American Medical Association. It is felt that this will

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ARC WELDING HELMET

H-2

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ARC WELDING HELMET

H-1

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have a considerable effect in improving the standard of medical practice in many of the mining areas. It has also brought better physical facilities to physicians in the areas where they operate.

It is the general plan of the Fund to establish the best possible service for their beneficiaries at a fair cost and with the cooperation of the organized medical societies in the area they are taking definite steps in that direction.

Industrial Wastes

Industrial Wastes, Their Disposal and Treatment, Edited by Willem Rudolfs, American Chemical Society, graph Series No. 118 published by the Book Division, The Reinhold Publishing Corporation, 330 West 42nd Street, New York 36, N. Y., 1953, 7 V 11 plus 497 pages, \$9.50.

THIS MONOGRAPH consists of a very short statement of the problem of water pollution by industrial wastes and the extent of the pollution problem in two short chapters on the specific pollution problems in specific industries. Each chapter is written by a specialist or a group of specialists in the particular type of pollution control which is considered in that chapter. Air pollution is considered only incidentally in any of the chapters. The majority of the authors simply ignore the possibility of air pollution.

Treatments are similar only in that in each instance the manufacturing process producing the waste is described briefly, sources of the waste are described or listed and quantities and characteristics of the wastes are listed for typical plants, for specific amounts of products, and in a number of instances for the industry as a whole. Possibilities of recovery of useful by-products or other useful materials are discussed in a number of instances. Also possible methods of treatment with observations on the effectiveness of various devices and the effects on municipal sewage disposal plants of discharging treated residues to sewers are discussed in almost all instances.

The authors in all instances assume the reader will have some rather detailed knowledge of the biological, chemical and engineering principles involved in waste treatment in general. The text is not difficult but does require some preparation.

For those who wish to go further into the subject there is a substantial, although not an exhaustive, bibliography attached to each section.

This monograph gives a good general picture of the practices in a considerable number of industries and the results which have been achieved with them. It will be an excellent general reference for anyone wanting a picture of the over-all industrial waste disposal situation in the country and, in addition, will be useful for sanitary engineers, executives and public officials directly concerned with waste disposal problems and programs.

Prolific Pests From page 35

Materials. Galvanized sheet metal, 24 or 26 gauge is used for making cuffs, channels for gnawed doors, jambs, thresholds, sills and sides of windows, various types of rat guards, and for general patching of holes, etc.

Galvanized hardware cloth is used for rodent proofing doors and windows. Sixteen gauge is preferred although a nineteen gauge is sometimes used. Preferred mesh is three by three or nine openings per square inch. The size of these openings is approximately five-sixteenths of an inch square. This hardware cloth may be purchased in 24, 30, 36, and 48-inch widths.

In order to keep small flying insects out, 16-mesh wire screen cloth, having 256 openings per square inch, is recommended. It is made of various metals, as black enameled steel, zinc alloy, and copper. Common widths run from 18, 48, 54 and 72 inches.

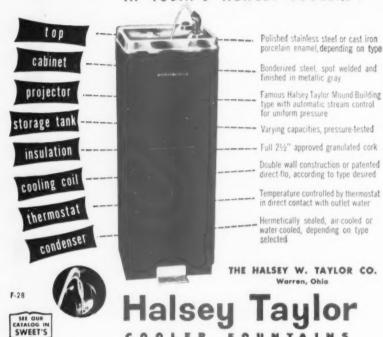
Miscellaneous supplies will consist of wire staples, rivets, wood screws, nails, bricks for plugging large holes in the masonry, and cement and sand for general patching. Holes may be filled by forcing in crumpled hardware cloth then pouring a cement mortar over it. The mortar drops down into the interstices of the wire and this not only makes a solid fill, but a well-anchored one as well.



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pected it is wise to protect basement windows with iron or steel double crimped heavy wire cloth, rather than the ordinary galvanized hardware cloth. Basement windows may also be protected by using expanded metal with the mesh of the metal not exceeding 3's inch, since a small rodent may squeeze through a half-inch opening.

Remember that an ounce of prevention is worth a pound of cure. and freedom from infestation is your reward for thorough proofing against rodent and insect entry.

Cases for Comment

From page 66

he returned to work and completed his regular turn. On return to the dispensary on the following day, further examination revealed a torn cartilage but no swelling. The plant doctor recommended an operation and arrangements were made for hospitalization.

The employee had stated that his knee had snapped once before and that that was about nine months previously while water skiing.

The Committee of Judges decided, with several dissents, that the injury to this employee arose out of and in the course of employment and should be included in the industrial injury rates.

Paragraph 2.3 of the Code states, "if an injury occurring in the course of employment aggravates a preexisting physical deficiency or weakness, the resultant disability shall be considered an industrial injury and shall be classified according to the ultimate total extent of the injury. . . .

In this case, a preexisting physical deficiency was aggravated by a fairly normal action.

Quite often, persons with "trick" arms or legs or with other similar weaknesses and deficiencies are placed on jobs which tend to aggravate such conditions. Perhaps all such injuries cannot be prevented, but proper acknowledgment of such possibilities, where physical examinations and placement programs are in effect, can help to keep them to a minimum.

Soup For Lunch

WITLE A secretary, employed in a control laboratory, was washing a 400 ml beaker, it collapsed, severing a tendon in the right thumb-resulting in four days absence from work. This employee was washing the beaker during her lunch period with the intention of using it as a container for hot soup.

The Judges decided that this injury did not occur "in the course of employment" since it was during the lunch hour. Also, it did not arise "out of employment" since the employee was washing a container for personal use.

In many companies, employees are allowed access to facilities with which they are wholly unfamiliar. Many accidents occur as a result, involving not only personal injury but also damage to equipment. It is good practice to have rigid control over such activities.

Neglected First Aid

ON A Friday, a warehouse employee while attempting to close a railroad car door, received a slight bruise and abrasion on top of the distal joint of his right thumb. He immediately reported to the nurse on duty who rendered proper care and told the man to report back for redressing at the end of the shift. This was done, and the injured was requested to call the first aid department the next day if his thumb bothered him. (Saturday and Sunday were his regular days off.)

In accordance with instructions, the injured called the first aid department at 10:00 a.m. Saturday morning stating that the thumb was sore and slightly painful but he thought it was all right. The nurse asked him if he would drop by first aid on his way to town and he agreed. When seen at 10:45 a.m., the wound showed marked swelling and the nurse asked him to report to the company medical director's clinic on his way into town. The man agreed to do so.

Fifteen minutes after arrival at the clinic, two emergency cases were brought in. One hour later the injured employee's patience ended and he went on his way without seeing the doctor.

Sunday afternoon the thumb became very painful and at 9:00 p.m. he allegedly attempted to contact his family physician. Repeated calls were allegedly attempted until midnight. (The company First Aid Department is staffed with registered nurses 24 hours per day, 7 days per week.) He made no attempt to call the first aid department.

On Monday morning he did not



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call in to report his condition or that he would not be in to work. He saw his family physician and the case was diagnosed as blood poison from an infected wound. The attending physician placed the employee in the hospital where he remained for ten days.

The Committee of Judges decided that this injury should be included in the industrial injury rates of the company. Since the injury arose out of and in the course of the employment and caused lost time, it is reportable. The fact that the employee received some first aid and ignored further first aid does not change the classification.

Did the employee know the first aid facilities of the company were available 7 days a week, 24 hours per day? Education of all employees on consequences of neglecting minor injuries could eliminate many such cases. Use of examples of such cases within the plant help to make the information more personal. Neglect of just one case with development of complications would cost more than the cost of a vigorous promotional program.

Danger and Illusion

-From page 33

"I'm like that Montana trooper, I'm scared of the Beartooth Pass road, and of the deadly power of big machinery. But like that trooper, I've learned that most of my job is trying to teach our people that there is danger in the easy turns and the wide bridges; especially when the turns look easier and the bridges look wider than they really are."

And Macey, who is a reasonable enough guy for a front-office trouble shooter, took it well enough to look over the data later and decide that maybe I was right. Yeah, I was right—I and a state trooper with blood on his shirt drinking coffee at midnight in a cowtown cafe.

Accepted Rules

From page 19

specifications cannot in themselves guarantee safety.

As already stated, they must be acceptable and spell need and worthiness of use: They should avoid negative prohibitions in terms of incomplete "do's and don'ts." They should be written in an instructive manner to provide informative instruction and

Every ladder
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National Safety News, September, 1953

promote good technical perform-

Another outstanding American trait is the manner of development and establishment of our nationally recognized codes and standards. This typifies our national propensity to sit down, pool experiences, and talk things over. In most cases our established specifications and accepted practices have been arrived at by free interchange of experience and by deliberation of viewpoints of variously interested groups. These work standards and safety measures have become vital to our complex technology and underlie our largescale production, distribution, and consumption. Accepted importance of present-day operation of standards-making is indicated by the fact it involves nearly 200 trade associations, industrial and insurance service groups, technical societies and government agencies 50 of whom are sponsoring more than 1000 committees, with a chargeable time-cost of personnel alone estimated to exceed \$5,000,000 a year. The important activities of the American Society for Testing Materials and the American Standards Association are well known.

From the standpoint of fire and explosion control, standards relating to design, installation, operation, and maintenance of buildings, equipment, and processes are important. The National Board of Fire Underwriters and the National Fire Protection Association are pre-eminently active in this field. In this activity alone, there are nearly 75 different committees whose interests range from airconditioning. flammable liquids, liquefied gas and fuel oil-burning systems, through fire protection equipment and zoning. The National Board has been engaged in standards activities for more than 75 years and presently promulgates some 60 standards.

Application of Safety Measures

Formal development of practical measures constitute only one phase of a good safety program. An equally important phase of any safety effort is creation and maintenance of a receptive state of safety-mindedness. This cannot be

A professional approach to industrial safety

Through its experienced staff of safety engineers Marsh & McLennan works with company management on the formation and execution of plans for safeguarding your employees. Results are: fewer accidents, better health, less absenteeism, improved industrial relations, lower insurance costs. Your inquiry is invited.

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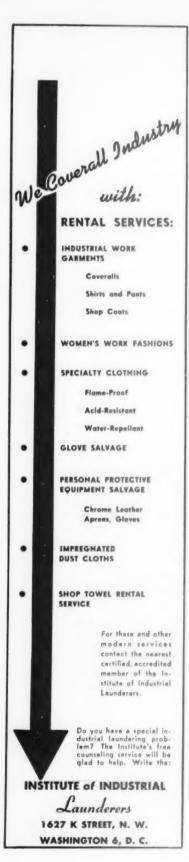
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coded or legislated, it can only be brought about through broad dissemination of proper information and persistent and sincere application of recognized safe practices. Success of these latter activities (and the entire program) may be said to be a direct function of interest and support provided by top-level management, and through it, in turn, on the attitude of its supervision. While this may have been regarded, in the past, as a matter of moral responsibility, it has become, in many instances, a legal one.

Progressive management today recognizes safety as an integral and inseparable part of production and plain good business. Safety, in terms of good design. proper construction and installation, periodic inspection and preventive maintenance, is certainly an administrative matter. Furthermore, where sincere and full support of management is provided at policy level, a sense of worthiness and confidence is generally instilled and proper enthusiasm is engendered from the top to the bottom of the organization. It should not be overlooked that with closer management-worker ties, labor is more inclined to share in the responsibility of good safety performance.

Once authority is delegated, it becomes the supervisor's responsibility to translate directives into practice and keep management properly posted on progress and on any new requirements as they develop. To properly carry out this duty, the supervisor must have a working knowledge of existing codes and be thoroughly familiar with generally accepted good practices. It also becomes his responsibility to plan all job operations with preventive foresight before work is started and determine all hazards present and take prompt corrective steps to protect the employee and the public from injury as well as property from damage.

Underlying control of every industrial operation or process, no matter how technically complex and how highly mechanized, is human behavior. Since safety is often regarded as a matter of human cooperation, and since man is regarded as a creature of habit, it appears that another effective step in positively assuring the "following of established rules" lies in providing proper training and instruction to the individual worker. Such a training program, to be complete, should not only cultivate good workmanship but should also provide an understanding of the "why" of "don'ts." It should stimulate constructive thinking and develop a sense of awareness that will alert the worker to spot unsafe practices and hazardous work conditions.

To keep pace with the everchanging environment of our atomic-industrial era, our managerial and technological skills will need to be continuously and systematically coordinated. Their leadership and initiative to assume a proper share of responsibility for establishment and fuller application of recognized safe practices and accepted codes, will prove a "better way" of improving public service, public security and public welfare—and make America a better and safer place to work and live in.



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Fading Menaces

From page 22

usually rich mixture. In fuel oils they have always been traced to contamination.

Years ago, when it was common practice to purify gasolines in batches rather than by continuous process, static fires were common, In fact, the tanks in which this job was done, known in the refining trade as agitators, were usually provided with explosion hatches and steam smothering systems to take care of explosions and subsequent fires when the mixtures were agitated with air. Where still used, batch agitators can be successfully blanketed with steam before and during the agitation process and thereby made inert and non-explosive

Historically, the most common manifestation of static as an ignition cause has been the filling of rubber-tired trucks. Such instances are exceedingly rare today because the industry has stopped relying on drag chains as a means of dissipating the static charges carried into the otherwise insulated truck tanks by the inflowing oil. The drag chain itself was the industry's first attempt to solve this problem.

Then, in 1927 the static committee of the American Petroleum Institute reported that, in its opinion, there were two sources of static to be protected against:

1. The charge that accumulated on the tank from the sloshing of the gasoline that occurred on the road.

2. The charge carried into the tank by the inflowing cargo.

The API recommended the use of drag chains to take care of the former and the grounding of the tank prior to and during the filling operation for the latter. Finally the API in 1940, through a grant to California Institute of Technology, secured the effective research work of the late Dr. S. S. Mackeown and Mr. Victor Wouk. Among other things learned from the workmen were:

1. Complete unreliability of the drag chain, during dry weather.

2. Sloshing of gasoline did not create a charge on the vehicle.

3. All-rubber tired vehicles (even those without cargo tanks or oil cargo) generate and accumulate static charges during the periods of low humidity, as



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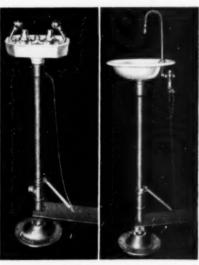
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a result of the rolling of the rubber tires over the pavement.

4. A simple electrical bond between the metallic fill pipe and the tank vehicle is all that is required to prevent fire from static sparks during truck filling operations.

5. No special protection against static need be taken during normal and typical transfer of gasoline from a tank truck to an underground storage tank by means of a rubber hose.

6. The amount of static current generated by the flow of gasoline through pipes can be measured and correlated with the rate of flow of the commodity.

The filling of the tank truck is, of course, just a special instance of the general case of building static charges by pouring petroleum into an insulated vessel. A barrel setting on a wood platform or on a dry concrete floor is a similar case, and any small vessel used to sample products, if so constructed that it can be insulated by its handle, is another example.

It was at one time thought that tank cars could also accumulate static charges, but there have been few cases of fires while loading tank cars and static fires that have occurred can be charged against rubber tubing used as a conductor pipe into the tank dome. Nevertheless, static protection manuals still carry the warning that tank cars should be electrically bonded and grounded during filling and discharging operations by means of special equipment.

Like much of the early literature on static, these precautions are now considered unscientific and not based on fact. A tank car is so thoroughly bonded by its construction and so well grounded by its contact with the rails that it is impossible to accumulate any static charge capable of causing ignition.

Stray Currents

Stray currents in an industrial plant are of two general types: those that are man-made; and those that are the result of chemical soil action. There have been few fires charged to stray currents. Man-made leakages from power sources are generally accidental. I found two such instances in one area.

In the first case, an underground conduit had corroded and groundwater had wet the conductors suffi-



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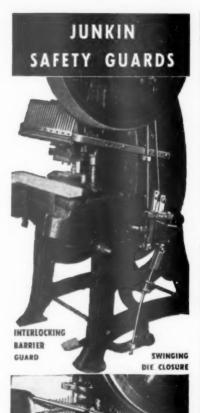
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ciently to cause some power leakage from the 440 volt line. The leakage was not sufficient to open the circuit. On the small wooden pier serving this plant was a bond wire permanently attached to the yard piping, which in turn was bonded to the conduit. Whenever a barge or tank vessel was to be connected to the yard piping by means of a rubber hose over the pier, this bond wire was first connected to some metal part of the vessel. The power leakage was discovered by sparks coming from the end of the bond wire when it was thrown onto the steel deck of the barge.

The second instance was shown up by sparks between flanges of hose being connected between a fuel oil tanker and piping on a wooden pier. In this instance the source of the potential was leakage from an industrial electrical railway which had become crossed up between the rails and the oil piping.

The oil industry for many years has required the bonding of piping on oil loading and discharge piers to every vessel being loaded or discharged where the commodity could give off flammable vapors. The origin of this precaution was also a stray current situation where the rails of an electric line extended along a wooden pier became crossed up with the oil piping. It was assumed by those who first suggested the bond cable between the pipes and the ship that this would eliminate the hazard of arcs between hose flanges when these were being made up or disconnected. Unfortunately, these grounding cables have become known as static cables although obviously they serve no purpose whatever with respect to static and little, if any, with respect to stray currents

Since most rubber hose used for handling oil to and from tank vessels is heavily reinforced with metal, it is also, as a rule, an electrical conductor. In addition, many hose makers insert a specific bonding wire into the hose carcass to inter-connect the end nipples. Present thinking, in connection with preventing the drawing of arcs from hose flanges, is to permanently insulate the last



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section of the oil piping on the pier by means of insulating flanges, and then to ground the rest of the piping permanently to the water. The effect of each insulation is to interrupt any possible flow of stray currents from the yard piping to the vessel through the conductors in the hose. When this has been done, the bond cable to the ship is discarded.

This change in protection procedure has also proved beneficial on those piers under cathodic protection. Many modern oil piers are built of steel and it has been found profitable to protect them by this means. Obviously, if the pier is bonded electrically to every vessel it serves, the cathodic protection is to a large extent vitiated.

While there have been few, if any, instances of fire resulting from stray currents, there has been a tremendous amount of interest in corrosion resulting from the various types of currents that are found to flow in piping and into the vessels which rest directly on the ground. Protection against corrosion has required the installation of insulating flanges in pipe systems and this in turn has raised the question of possible sparking, over and through these insulating flanges, when lightning strikes some part of the vast metallic grid within a refinery.

There have been instances of these insulating flanges being perforated in this way, but so far as I have been able to learn, there have been no resulting fires. Nor have there been any reported injuries to personnel from lightning surges along pipe lines when some of the tall vessels to which they are attached have been struck. A good case could be made for the possibility of such an injury occurring, but apparently it hasn't happened yet.

There is one sphere of interest in which we fire protection men find ourselves frequently at variance with those who interpret and administer the National Electrical Code. The code requires that certain electrical equipment be made explosion-proof if exposed to flammable vapors. No one has any quarrel with this provision, but we have found that the inspectors and even the designers are sometimes quite unrealistic in defining hazardous areas in oil plants.

In a broad sense, every oil refinery is hazardous. Within it are vessels that store low-flash materials and pipes and pumps that convey such products under pressure. Unfortunately, it is necessary in spite of this fact to use open fires in the refining process. As a matter of standard design, such open fires are in areas where piping and vessels are so built and operated that they hold their contents securely. However, if a pipe breaks or a pump fails or a vessel bursts or overflows in the presence of an open fire, such a spill will probably be ignited. That is a calculated risk which the industry accepts. But having accepted it, the industry resents having to buy explosion-proof electrical equipment within the same area.

The mathematical chance of an electrical failure and an oil spill occurring simultaneously in such an area is so remote, we feel that it also may be accepted as a calculated risk. We therefore recommend explosion-proof equipment only for such locations as do not normally have any other sources of ignition constantly present, but do normally have flammable vapors present in sufficient quantity so that any accidental spark may cause a fire.

In California our conflict with the National Electrical Code caused the Western Oil and Gas Association, representing some 200 oil companies, to insist that this code be not adopted in that state. Instead a California code was written, with probably 90 per cent lifted from the National Electrical Code, but in addition and at variance with the latter, taking into account the peculiar conditions found in oil-processing plants, moving-picture studios, and other local industries.

From the standpoint of the California Oil industry, we got a much better code than the rest of the country, but I doubt whether anybody outside of California will admit it. We no longer have to put explosion-proof lights and switches in laboratories where Bunsen burners and other open flames are constantly present.



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I know of one refinery that spent a hundred thousand dollars unnecessarily on explosion-proof equipment in an area where gas and oil-fired furnaces were located. We won't have to do that again.

Fire protection from all causes is a combination of good engineering and cold-blooded economics. Whenever the estimated cost of fire protection exceeds the historical loss expectancy, you cannot sell fire protection. The same is true of insurance. Any fire protection engineer who doesn't get the economic approach into his head early in the game doesn't stay in it.

Let's Be Practical

From page 25 as true today as it was 30 years ago and the man for the job must have whatever it takes to get results in the face of such stipulations. A veteran safety equipment salesman expressed the feeling of other observers when he remarked that the only consistent thing about safety departments was their inconsistency. This is as it should be, for safety departments and the men who run them adapt themselves to the conditions of their industries and to limitations imposed by management. This makes them almost incomparable and precludes any hope for a proto-

type organization.

When safety departments are examined they are found to be "custom made." Although their techniques may appear similar they are not the same and each department's set-up and functions have been more or less designed for particular needs. The points of difference which make the job easier for the safety engineer in one industry would likely make it more difficult for one in another industry.

Recognition of this need for adaptability in accident prevention methods is necessary for successful operation of a safety department. Because of this, most packaged plans for accident prevention are loaded with trouble unless they are trimmed to fit each problem. Some of the best intentioned safety efforts have had setbacks. They will continue to have them when ideas are introduced without analysis just because they worked

somewhere else and were highly recommended by persons unfamiliar with the nature of the particular industries for which they made the recommendations.

Except for certain basic statistical work, there are no ready-touse package plans for accident prevention. There are, however, many and varied useful aids constantly appearing which have been proof tested. From these may be selected ideas for development and application by a safety department to meet its particular problems.

The test of any idea for accident prevention simply stated is, will it work here; and if not, can it be made to work? It does not matter whether a safety department is under a medical director or the plant hospital is administered by the safety director; or whether purchasing of safety equipment is done by the purchasing agent or by the safety department. There is no reason why a general stores department should not issue safety equipment provided it satisfies and correctly protects all those who need it.

Paradoxical twists are found through all activities of accident prevention. Whether it is investigating accidents, conducting safety meetings, or making a safety inspection there are many ways to successful accomplishment. The fact that there are many ways makes the job more difficult, for often only one of them will get the desired results in a given situation. Which idea works best is the argument that makes the lobbies at safety conventions roar all day long.

Selection of techniques for accident prevention is one of the toughest jobs for the safety engineer. He may not be sure which job is best. He may fail to adapt a sound idea to his problem. He may shy away from the best one because of its magnitude. He may fall back to a middling one and muddle through with middling results. If selection of techniques for prevention of accidents were not an endless duty the problem would be easier. But the breadth of the accident prevention field and the ever-changing problems are something of a tread mill.

With such a job to be done in



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an industrial plant of a size to require a full time man on accident prevention it is obvious that the man must multiply his effectiveness through existing employees or hire a staff which would bankrupt his budget. As his job is further examined the need for executive-sales ability along with any necessary specialized engineering peculiar to the industry is also evident. Lacking organizational ability he will either never get started or he will run himself ragged in a desperate attempt to do the thousands of things which must be done; things which for the most part could be done even better if delegated to someone else.

The extent of effective delegation, formal and informal, by a safety engineer will be the measure of his success for he does not prevent accidents. His ideas and teachings do it. Delegation of work is second in importance only to the selection of the techniques to be used.

In the selection of ideas for incorporation into a safety program the need for practical usefulness, result-getting qualities, cannot be overstressed. The simplest idea which gets things done without unfavorable reaction is usually the right one or pretty close to it. Although complicated organizational blueprints, paper systems for proposals and approvals, committees and sub-committees, and statistical detail to the point of questionable value may be mandatory in government operations and necessary in very large national industries, they become roadblocks in plants below a certain size. Usefulness is a determinant which should be applied as a test for any idea.

As the search for uncomplicated and useful ideas is pressed, the need for care in their selection and use increases. Each must be given consideration much as a doctor would give in making a diagnosis. The safety engineer must apply them as carefully as medication is given to an invalid. Reactions must be observed and changes made as may be necessary.

In most cases it is wise to slightly underdo the idea in spite of the well advertised slogan that you can overdo almost everything but safety. You can overdo a safety idea and it is a lot easier to supplement one as it moves ahead than to resurrect it after management has chopped its head off because it was too costly or otherwise impractical.

It is not safe in accident prevention when making a recommendation to "aim at a star and you may hit the moon." You may be overloaded and your blunderbuss may disintegrate. Overdoing of an idea should be guarded against.

Just about as many ideas are underdone as are overdone and there are times when underdoing can be just as fatal. An example of this may be found in the sale of safety shoes by some industrial plant shoe stores. In a plant large enough to justify a store, the store-keeper or safety engineer may undertake the idea with a stock limited to D and EE widths because his appropriation was cut or he lacked the courage to ask for a stock large enough to do a thorough job of fitting.

He will sell some shoes for a while and then misfittings will begin to dog him. There will be grounds for the misworded complaint that "safety shoes hurt my feet; I can't wear them." Somewhere between these extremes of overdoing and underdoing safety ideas, lies the sound approach for the presentation of them.

If, then, the ideas have been selected with care and adapted to the needs they must fill they will have inherent appeal in their usefulness and simplicity. Because they are practical they can be sold. In the hands of a sales-minded safety engineer they will get results.

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From page 64

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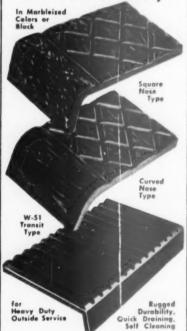
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Green Cross News

From page 56

The leaflet went on to say that "the Tennessee Safety Council has done its best to paint safety down the center line of every highway in the state, but instead of the green of safety, their paint brush now comes out of the bucket dripping red . . . red, the color of wet blood, behind dry statistics. spelling out accidents that spill out lives, because the safety message hadn't reached nearly far enough."

This was followed by an appeal for funds to lift the Safety Council out of the red. "Dig down into your pocket a few inches; it may save digging down six feet for a tragedy later." This stirring appeal should help in the constant struggle for safety.

"Champions" of Safety

Marge and Gower Champion, sensational young dance team that has taken Hollywood by storm during recent months, were honored on June 26 as "Champions of Safety" by the Eastbay Chapter, NSC. The young couple had graciously posed for "Jaywalkers' Tango," an illustrated article by Jack Burroughs of the Oakland Tribune. The series of striking action photos, followed by a Jack Burroughs editorial, filled the first page of the magazine section of the Tribune on Sunday. June 28, An appropriate plaque expressing appreciation for their interest in the public safety problem was presented by Tom A. Burke acting director, Western Region Office, NSC, on behalf of the Eastbay Chapter. Mr. Burroughs and Frank Kettlewell, Tribune photographer, were also given awards in appreciation of their services to safety over and above the call of duty.

Calendar Contest Winners for July

First prize in the National Safety Council's Safety Calendar Contest goes this month to Karl Clapper, general bridge and building foreman, Duluth, Missabe and Iron Range Railway Co., Duluth, Minn. The theme of this contest was haste makes waste. Mr. Clapper's line was adjudged the best of all those submitted. It was:

At his funeral, he was still in the

Second prize went to Miss Agnes C. Lomax, Fall River, Mass., for this line: Don't lose YOUR life saving time you won't need.

Third prize was awarded to Herb Kruger, shovel operator, Noranda Mines, Ltd., Noranda, Quebec, for the following line:

And they're there on his tambstone to roud.

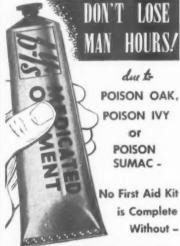
The July limerick was:

A hot shot named Herkimer Sneed Thought the big thrill in driving was

> He said, "Sure, I drive tast"-And those words were his last

Thirty \$5 awards were issued to: Vern Lindquist, safety inspector, Hughes Aircraft Co., Tucson, Ariz, John Larimer, master mechanic, Co-

Why cure? PREVENT!



MEDICATED OINTMENT

NOW USED BY U. S. Forestry Service, Region 5, GSA stock item 51-0-781-25, California State Divison of Forestry, So. Calif. Edison Co., Pacific Telephone & Telegraph Co., Calif.-Oregon Power & Light Co., Rhode Island Division Forests & Rosco. Telephone Co., Santa Monica, and many others as preventive and alleviative. For your convenience and to fit your first aid kits. 3 ounce—1/5 ounce and 1/6 ounce tubes. REFERENCE AND LITERATURE ON REQUEST. Manufactured By

Manufactured By B-Y'S of California, 3010 W. 7th 5t., Los Angeles



Safety Lifeline Lock

FOR SCAFFOLDS AND SWINGS

Locks automatically, instantly. Slips onto ordinary rope lifeline. Movable up or down with man. Instant lock position at all times, whether stationary or being moved up or down.

Snaps into safety belt: No adjusting. In-expensive. Overall length approx. 13". Does not harm rope. Weight: approx. 5 lbs.

Send for folder

SAFETY TOWER LADDER CO. 1024 BURBANK BLVD. PO BOX 1052

BURBANK, CALIFORNIA Manufacturers: Safety Device for Ladders



Guide Pin Covers



PROTECT OPERATOR AND GUIDE PINS

Effectively guard against injury to operator, die and press on operations where bushings leave the guide pins. Protect pins and bushings from chips and dirt when entire pin and bushing are covered Inexpensive, easy to attach.

Felt Oiler Ring in top units provides POSITIVE lubrication.



WRITE TODAY FOR DESCRIP. TIVE FOLDER AND PRICE LIST

Title

Wiesman Manufacturing Co. 31 South St. Clair Street . Dayton 2, Ohio

lumbus Packing Co. (Div. of Armour & Co.). Columbus. Obio.

Mrs. Juanita M. Armstrong, revenue & taxation clerk-Refund Division. State Capitol, Topeka, Kans.

Mrs. Dwight L. V. Trueschel, Chesaning. Mich.

Mrs. Faith Elder, Niantic, Ill.

Herbert K. Croll, millwright, Electro Metallurgical Co., Niagara Falls, N.Y.

Mrs. Austin C. Fort, Morristown, N.J. Leon Nichols, railway mail clerk, Worcester, N.Y.

Barbara Sue Goddard, St. Louis, Mo. C. S. Anderson, professor of agricultural education, Penn State College. State College, Pa.

Sherwin Smith, Jr., salesman, Glidden Co., Cleveland, Ohio

Max Levin, postal clerk, Oconomowoc, Wis.

Harry Krug, Kansas City, Mo.

Mrs. C. H. Bowlen, Haverhill, Mass. F. E. Miller, editor, The Liner, Interstate Oil Pipe Line Co., Shreveport, La.

W. J. Salisbury, mine survey helper, Noranda Mines, Limited, Noranda, Onebec

Walter H. Carter, Jr., Industrial & Public Relations Dept., The Texas Co., Houston, Tex.

J. R. Rowe, Universal-Cyclops Steel Corp., Bridgeville, Pa.

Leros Hull, chief clerk, M K & T, Dallas, Tex.

Lester MacMahon, machinist foreman, Gardner-Denver Machine Shop, Denver, Colo.

Mrs. Trevor T. Crawford, Colorado City. Tex.

Mrs. Ernest M. Grider, Indianapolis, Ind

Mrs. Norman Keith, Galvanizing Department, Keystone Steel & Wire Co., Peoria. III.

Cecil O. Harper, identification technician, Police Department, San Diego, Calif.

Jerry D. McCoy, low pressure fireman, Sinclair Refining Co., Houston,

Virginia Russell, St. Paul, Minn.

Dorothy E. Vandiford, clerk, Mate rials Acc't. Dept., Winnsboro Mills, Winnsboro, S.C.

William A. Charles, stock comptroller, B.B. Chemical Co., Middleton, Mass

Mrs. J. E. Morris, Grimsky, Ont.

Roger W. Dana, quality control inpector, Kimberly-Clark Corp., Neenah,

"My uncle was a conductor." "Railroad or orchestra?

"Neither. He was struck by lightning.

A lot of guys are so busy learning the tricks of their trade that they forget to learn the trade.

Designed

by coal miners for coal miners

Coal Miner's Cap



This is the cap that has been acclaimed by many in the industry as the greatest development in Coal Caps in years.

GREATEST

Designed for Built of rugged light weight Fiberglas. Surpasses all standard safety tests. PROTECTION! and is approved by the state of Pennsyl-

vania. Deep groove in crown secures lamp cable, gives more headspace, acts like a girder for extra strength. The flared raintrough edge, all around the hat, protects ears from being nicked and keeps water from running down a man's back. Fiberglas is flame resistant and passes dielectric tests eliminating all fear of electrical hazards.

COMFORT!

Designed for Free floating ham-mock suspension "FELT HAT" guarantees a perfect fit always with plenty of room for air circulation. Head-

band size can be adjusted in just a few seconds or when needed completely changed with inexpensive leather or leatherette headbands.

> FREE brochure on Bullard Safety Miner's Caps. Write

E. D. BULLARD COMPANY

275 Eighth Street, Dept. S-1, San Francisco, Caiif.





safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Mobile Loading Ramp

Designed for use in facilitating the loading of yard cars, the mobile loading ramp enables utilization of power trucks in the loading operation. Combining strength with the extreme lightness of magnesium, the ramp is engineered to support loads of 13,000 pounds or more where required. Its lightness enables one man to move it



about the area with ease. It measures 30 feet long by approximately six feet wide.

Equipped with a hydraulic lifting mechanism, the ramp can be raised to any car level. A safety lock mechanism anchors the ramp to the car during loading. A retractable trailer hitch permits power towing for long distance mobility. The ramp is also used where dock facilities are over-crowded, as well as in places where no loading dock exists. Additional information may be had from the manufacturers.

Magline Inc., Pinconning, Mich.

Asphalt Tile Dressing

Daily maintenance and dust-cloth treatment of asphalt tile floors is facilitated by use of a dressing known as Hil-Sweep. Although developed especially for asphalt tile, the manufacturer also recommends it for use on other types of floors, walls, farniture, woodwork, blackboards or other surfaces from which dust or loose soil is to be removed.

When sprayed or sprinkled on floor brush, mop, or dust cloth it quickly absorbs dust, then evaporates, providing a luster-clean surface. It leaves no residue to discolor floor surfaces, will not remove wax film, is non-flammable and has a pleasant aroma; according to the manufacturer. For complete information write:

Hillyard Chemical Co., St. Joseph, Mo.

Cover Goggle

A new goggle known as the Kover-Mor provides a comfortable fit with clearance over large-frame prescription glasses. Two versions are offered, a chipping style, with clear, heat-treated glass lenses; and a welding goggle, with choice of filter lens shades

Molded nylon eye cups are a feature of the new goggle which gives the user the advantage of lightness, toughness, nonflammability and low conductivity of heat. Standard 50 mm. round lenses are used in both chipping and welding versions. External lens retaining rings make lens replacement quick and easy.

A rigid metal top bar is used on Kover-Mor goggles. This is said to provide an adjustment to the individual user's face,



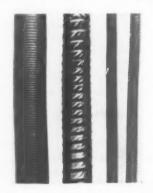
and make the goggle easy to take off or put on with one hand,

Two-way ventilation is provided through slots in the lens retaining rings, and screens in eye cups. Full details from the manufacturer:

Willson Products, Inc., Reading, Pa.

Ventilating Hose

A new, flexible hose is now being introduced by the Flexaust Co. under the trade name Portovent. This new product



for fume exhaust and ventilation applications has unusual lengthwise compressibility, good air-flow characteristics and a large cross section, even on sharp bends. It is easy to install, transport, handle and store.

Portovent is made from cotton or nylon fabrics, impregnated with neoprene and spiral wire reinforced. It can be supplied in sizes from four to 36 inches inside diameter and is available in any length. It can be cut to size in the field with no weakening or raveling since it is bonded and not stitched. For full information write:

The Flexaust Company, 100 Park Ave., N. Y. 17, N. Y.

Item No. 4.

Sun Glasses

Protecting the eyes from excessive sun glare while retaining true color vision is the purpose of a® neutral gray optical glass developed by Bausch and Lomb Optical Co. The glass is said to absorb 85 per cent of visible light, admitting the 15 per cent necessary for sharp vision with no distortion of color in the visual spectrum. The glass, which is claimed to eliminate potentially harmful invisible infrared and ultraviolet rays, has been made into lenses for the firm's new Ray-Ban G-15 sun glasses. Complete details are available from:

Bausch & Lomb Optical Co., Rochester, N. Y.

Item No. 5.

Floor Maintenance

A new heavy-duty cleaner for wet- or dry-pickup in industrial floor maintenance is announced by Premier Co.



Designated Model P-901, the unit has a 1 h.p. motor with permanently Iubricated ball bearings. It provides a vacuum equivalent to 58 in. average maximum water lift. The container, finished in baked-on metallic gray, has a liquid capacity of 13 gallons, and a dry capacity

Manufacturers are invited to send in announcements of new

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

of 1.25 bushels. Filtering area is 1,060 sq. in. For literature and price information write:

Premier Company, 755 Woodlawn Ave., St. Paul I, Minn. Item No. 6.

Glove Tester

The development of a line of Hanco glove testers is announced by F. R. Hannon & Sons. The new tester is said to accurately measure the dielectric strength of rubber and synthetic gloves normally



found in the electrical field. It is available in 4, 6, 8, and 10 glove models, and is said to meet all specifications of the American Society for testing material. Having a capacity of 50,000 volts, it can be manually or automatically controlled. Write the manufacturers for complete details:

F. R. Hannon & Sons, 1605 Waynesburg Rd., S. E., Canton, Ohio.

Spanner Wrench

Said to be non-sparking, a safety wrench has been designed to rotate hand wheels on stubborn valves. Called the "Safety-Spanner," it is made of aluminum magnesium alloy, and the handle is claimed to



withstand more than 500 pounds pressure and the hook-jaw 1,200. It can be operated at a 45 degree angle and is said to fit 95 per cent of all standard hand wheels. More information is available from:

The Bergman Safety-Spanner Co., 927 Butler St., Toledo, Ohio.

Fire Extinguisher

Said to give extra protection against incipient class A and C fires, the American-La France-Foamite Corp. is now providing a one quart, trigger-operated fire extinguisher.

The new Alfco Model PCB-1 is a stored



pressure unit charged with bromochloromethane, more commonly known as "CB" liquid, is reportedly a faster-acting vaporizing liquid fire extinguisher agent effective on flammable liquids and electrical type fires. Fully illustrated literature may be obtained by writing:

American-La France-Foamite Corp., Elmira, N. Y.

Plastic Packaging

Item No. 9.

E. D. Bullard Co. has begun packaging its line of safety equipment in colorful, printed, polyethylene bags. Included in the equipment are Fiberglas and aluminum hats and caps, sandblast helmets, safety belts, hoods and firehats.

Several advantages are expected from the new packaging. It is believed that the equipment will remain in clean condition even if stored on factory shelves for long periods of time. When an item is issued to a workman, it will be in the same condition as when it left the factory.

Each package contains the name of the company, its trademark, and descriptive



copy in color. Each bag has a round steel bottom and open top. The equipment is simply slipped into the bag and the bag folded under. For more information on these bags write:

Mehl Mfg. Co., Div., Sydney-Thomas Corp., Cincinnati, Ohio.

Warning Light

A new type of blinking warning light which operates on four standard flashlight cells is now on the market. Called the "Life Guarder," the warning light is designed to protect motorists forced to make car repairs on dark roads. A red flashing



beam visible for miles in every direction warns oncoming motorists.

The Life Guarder is also convenient for marking hazardous locations, yards and industrial areas, acting as a beacon on docks, warning of storage sheds of flammable and explosive materials, and other uses. For illustrative literature write:

Justrite Mfg. Co., 2061 N. Southport Ave., Chicago.



safety equipment for industry

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Floor Sweepers

The Plantman Floormobile offers a high degree of speed and efficiency in collecting dust, powder and ordinary traffic litter from factory and warehouse floors.

This machine has a large suction nozzle mounted in fixed position just above the



floor surface. The nozzle air cleans a 22inch path at speeds up to 20,000 square feet per hour. A wide orifice permits collection of large pieces of scrap and litter without clogging. Write the manufacturer for full details:

Handling Devices Co., Inc., 43-45 Pearl Street, Brookline 46, Mass.

Hose Line Eductors

The Rockwood Eductor is designed for proportioning wetting agents and foam liquid into hose-lines to provide proper



mixture of liquid and water for the operation of the corresponding Fog Foam nozzle. These eductors may be used anywhere in the run of hose used for fire fighting.

Instructions for use of these Eductors are available from:

Rockwood Sprinkler Co., 38 Harlow St., Worcester, Mass.

Barricade Sign

A new heavy-duty sign for road construction has just been designed. A large "Road Closed" sign in a rigid angle iron frame is topped by two or more red flags. The frame also supports a "Detour" sign and a directional arrow sign so that complete directions are given by this one stand. The frame holds so that the entire stand is collapsible and can easily be moved from one job to another.

The swinging sign which is interchangeable with signs with other wordings measures 24" by 24". The entire stand measures 49" to top of the flags and 65" wide



overall. Signs and frames are finished in synthetic porcelain enamel. For full specifications and prices write:

Standard Signs, Inc., 3190 E. 65th St., Cleveland, Ohio.

Safety Pliers

A new idea in pliers is the "cushion

throat" now being introduced by the Utica Drop Forge & Tool Corp. Particularly useful in pliers used for cutting electrical or spring wire, this cushion throat insert acts as a third hand to hold the short end of the wire during and after cutting. The "cushion" is red Plastisol, bonded in the throat beside the pliers' cut-



ting edges. As the pliers close, the cushion grips the short end of the wire, holding as the cut is made. Generally, the pliers must be opened to release the cut wire end. Details are available from:

Utica Drop Forge & Tool Corp., 2415 Whitesboro, Utica, N. Y.

Item No. 15.

Toilet Cleaner

Availability of T.O.C. for toilet and plumbing fixtures in new 5-gallon metal containers is announced by Gerson-Stewart Corp. The manufacturers state field tests



indicate that this new metal pail simplifies handling and eliminates possibility of damage in shipping or storage. Equipped with a wooden carrying handle, the covered pail has a safe pouring spout, which is pulled out for pouring only and will not interfere with stacking in con-

fined storage spaces. For literature write:

The Gerson-Stewart Corp., Lisbon Rd., Cleveland 4, Ohio.

Item Vo. 16.

First Aid Kits

A 24-unit first aid kit for life boats now available is said to meet new requirements of the United States Coast Guard for life boat equipment of ocean and coastal vessels.

The regulation requires that life boats on passenger vessels, cargo and miscellaneous vessels be equipped with certain



listed items, which include an approved first aid kit. The MSA Life Boat Kit, Model No. G12 has been designed to meet this requirement. The kit, a waterproofed case $9l_2^{(w)}$ by $9l_2^{(w)} \propto 23_4^{(w)}$ contains the required materials in packages sealed in protective plastic envelopes. Total weight

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of kit and contents is 6½ lbs. Detailed information is available from:

Mine Safety Appliances Co., Braddock, Thomas & Meade Sts., Pittsburgh, Pa.

Hydraulic Foam Tower

A portable foam tower, raised and lowered by hydraulic action, is now available for fighting flammable liquid tank fires. It is reported the tower can be set up in a fraction of the time formerly needed and may be used for tanks of varying heights.

Hydraulic action, which can be applied at a safe distance from the fire, raises the



tower to full height in a matter of seconds. When it is elevated to a point above the upper edge of the tank wall, pressure is released and the tower gradually descends until the gooseneck is hooked over the edge of the wall. Foam is then discharged against the inside of the tank wall and flows gently down across the burning surface. Lowering of the tower is also easy and fast. Full details of this new development are available from:

National Foam System, Inc., Westchester, Pa.

Item No. 18.

Lamp Hangers

Safe, efficient ground-level maintenance is the purpose of lights mounted on new standard metal poles of any height. The operation is accomplished by means of a pole top unit incorporating disconnecting and lowering hanger mechanism.

This new unit includes a pole-top fitting

complete with self-contained pulley, a divided mast-arm, the stainless steel operating cable, and a mast-arm and fitting.



The new hanger can be adapted to new standard metal poles by means of fabricated tenon insert in the top of the pole. Poles equipped with this disconnecting and lowering device also require a hand-hole, complete with pulley assembly, at the bottom for access to the operating cable. Available in single or double arm models, the unit is designed for street lighting, service stations, plant yards, and similar installations. Write for Bulletin WPH-

Thompson Electric Co., 1199 Power Ave., Cleveland, Ohio.

Item No. 19,

Industrial Vacuum Cleaner

The Multi-Clean light-weight industrial vacuum cleaner, Model 205B with redesigned 5-gallon tank equipped with electronic motor shutoff to prevent motor



flooding, and stabilized motor brushes, is announced. Formerly, these features were found only on the larger Multi-Clean models.

This new brush assembly design holds brushes at right angles to the motor armature thus causing them to wear evenly. They are so designed that when brushes are worn down to the point they are no longer safe to use, they cease to make contact and must be replaced before the machine will operate. This safety feature protects the motor armature. For further details write:

Multi-Clean Products, Inc., 2277 Ford Parkway, St. Paul I, Minn.

Item No. 20.

News Items

The appointment of the Material Handling Products Corporation of Syracuse as distributors of Yale Industrial Truck products has been announced by James H. W. Conklin, general sales manager of the Yale Materials Handling Division of the Yale & Town Manufacturing Company, Philadelphia.

The main office of the Materials Handling Products Corporation is located at 2704 Eric Blyd., East, Syracuse, where an expansion program designed to double the present floor space will be completed by June. Branch offices are located in Schenectady and Utica.

The American Ventilating Hose Co., a division of Callahan Zine-Lead Co., Inc., is changing its name to The Flexaust Co. Because the uses of its products, Flexaust, a spiral-wire reinforced hose; Protovent, a hose with lengthwise compressibility, and Bloflex, a collapsible hose, have spread to so many industries, the company is changing its name to better identify itself with its products.

The Hy-Test Safety Hose division of International Shoe Co., St. Louis, hopes to cut delivery time to industries in the Atlantic seaboard area by shipping direct from its newly established Philadelphia warehouse. Shoes to seaboard area industries will be shipped f.o.b. Philadelphia where a wide range of safety shoe styles for men and women are available.

The scaboard area served from Philadelphia is comprised of the District of Columbia, the New England States, New York,



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Pennsylvania, New Jersey, Delaware. Maryland, Virginia and the Carolinas.

The S. G. Taylor Chain Company, Ham-mond, Ind., has appointed D. W. Wilson as sales representative. Mr. Wilson will



assist S. N. Morison, manager of the firm's special Products Division of the Pittsburgh Sales Office. He will serve throughout Pennsylvania, New York, New Jersey. Maryland, Delaware, West Virginia and Ohio.

To facilitate management of its wire rope and sling services, Union Wire Rope

Corp. has estab-lished an eastern division comprising 15 states, including Ohio on the west and Tennessee and Virginia on the south.

L. A. Price, formerly district manager at Ashland. Kentucky, has been appointed division manager.







Robert K. Cooke, formerly representative in Pennsyl. vania, Maryland and West Virginia, is now district manager with headquarters in Pitts-



L. A. Davis, for-

merly Ohio repre-

sentative, becomes

district manager at

Columbus.

R. D. Tripp, formerly district salesman, will succeed Mr. Price as distriet manager.



D. E. Bedford will continue as district manager at Albany, N. Y., covering expanded territory from the District of Columbia north through New England.



J. R. Wells has been added to the sales staff at the Ashland, Kentucky Union Wire Rope office and warehouse.



Obituary

The passing of Harold E. Russell has been announced, with deep regret, by A. Schrader's Son, Division of Scovill Manufacturing Co., Inc.

Mr. Russell had served for more than sixteen years, having joined Schrader's in a promotional capacity in 1937. He later became a representative for Air Control Equipment and at the time of his passing was assistant sales manager of the Industrial Sales Division.

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| 425 | N. | Mich | igan | Ave., | Chicago | 11, | 111. |

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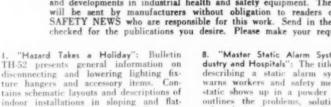
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| COMPANY | |
| ADDRESS | |
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Trade publications

in the safety field

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.



Shock absorbers, pulleys, and beam clamps, etc. shown. The Thompson Electric Co. 2. "Telecrane FM Carrier Communication System": Pamphlet illustrates and describes a two-way voice communication system for industrial use, linking "base with mobile units such as cranes, ore bridges, yard locomotives and boat unloaders. Mine Safety Appliances Co.

roof industrial structures as well as re-

cessed and concealed-type mountings.

- 3. Flame Resistant Fabrics: 20-page catalog describes and illustrates the structure and characteristics of flame-resistant can-Illustrations show how laboratory tests comply with government specifications for resistance to fire, water, weather and mildew. Also shown are examples of uses in industry, including canvas in temporary structures, protective covers, welding screens, etc. Philadelphia Textile Finishers, Inc.
- 4. "101 Hints on Better Floor Care": A handy booklet supplying the answers to proper floor care simply and briefly. De-scribes proper methods of cleaning wood floors, waxing aspahlt tile, linoleum, terrazzo, etc. Huntington Laboratories, Inc.
- 5. "Skin Toughening": Circular describes method of Athlete's Foot prevention through use of Onox soft sponge rubber mat for toughening the skin. Onox, Inc.
- 6. Safety Cans: Literature describing various stainless steel Justrite Safety Cans for handling and storing flammable liquids and waste. Approved and labeled by Un-derwriter's Laboratories. Justrite Mfg. Co.
- 7. "Improved Industrial Vision": Booklet describes Chippers' and Welders' Cover-glas goggles that will fit over every pair personal glasses and most types safety prescription goggles with and without side shield. American Optical Co.

- 8. "Master Static Alarm Systems for Industry and Hospitals": The title of a report describing a static alarm system which warns workers and safety men whenever static shows up in a powder plant. Also outlines the problems, solution and results obtained, giving details of the installation of a static warning system. The John Hewson Co.
- Linemen's Equipment: Catalog gives full details on the complete line of safety equipment for linemen and maintenance men. W. M. Bashlin Co.
- 10. Magnetic Separators: Designed to remove tramp iron and prevent product contamination, fires, explosions and ma-chinery damage, the magnetic separators, described in this 4-page, 2-color bulletin, are said to be very strong and capable of retaining their magnetism indefinitely. Eriez Mfg. Co.
- Abrasive Rolled Steel Floor Plate: Booklet AL-14 gives full details on Algrip abrasive rolled steel floor plate made from tough abrasive particles which make it virtually impossible to slip on steep inclines, Alan Wood Steel Co.
- 12. "Fire Fighting Products": Illustrated catalog on the complete line of cost cut-ting, efficiency-boosting products for mod-ern fire fighting. Rockwood Sprinkler Co.
- 13. Air-Paks: Bulletin No. 510 illustrates all Scott Air-Pak models which give employees working in hazardous fumes complete breathing protection enabling maintenance and repair jobs to be completed quicker and easier. Scott Aviation Corp.
- 14. Safety Shoes: Catalog contains complete information and shows all shoe styles in natural color. Safety First Shoe Co.
- 15. Super-Tough Safety Hat: New bulletin describes the new Willson safety hat which gives you effective, comfortable head protection in areas of overhead hazards. Willson Products. Inc.

- Rolling Scaffolds: New descriptive folder, No. 52 on tubular steel rolling scaffold towers explains application of the equipment for all types of maintenance and construction work. The patented method of locking braces to panels and panels on panels with self-contained Cam and Stack locks is included. Advance Scaffold Division, Beaver Art Metal Corp.
- 17. Display Signs: A catalog showing various types of changeable display letters, mounting structures and display units. Affording a powerful point-of-sale advertising force day and night, copy changing is simple, taking but a few moments. Wagner Sign Service, Inc.
- 18. "Code Identification": Circular illustrates Mecco safety steel stamps used for various inspection or piece work identification. Also featured are safety letters and figures, inspection hammers and other tools. M. E. Cunningham Co.
- 19. "Modern Materials Handling": 12-pag brochure features new methods in bulk and packaged materials handling. "On-thejob" pictures show handling of mail and other freight in rail yards; log hauling from forest to mill; coal stock piling; underground mining; handling and disposing refuse for sanitary land-fill operations, etc. Allis Chalmers Mfg. Co.
- 20. "Corrosion Resistance of Copper and Copper Alloys": Booklet B-36R explains the chemical and physical nature of cor-rosive attack in its various forms. Included is a tabulation indicating the relative corrosion resistance of the principal types of copper and copper base alloys when in contact with 183 different corroding agents. American Brass Co.
- 21. Mastic Flooring: Literature explains detail all necessary proportions mixing along with ingredients specified for certain jobs, such as new surfacing over old concrete floors or wood floors and underlayment for leveling floors prior to the application of tile, linoleum, etc. United Laboratories, Inc.

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"WOVEN-Gards"



BETTER HAND PROTECTION at amazing low cost

"Woven-Gards" are hand protectors, mitts, pads, sleeves and aprons made of a long wearing woven cotton safety material. Provide flexibility, comfort, resistance to abrasion and cutting. Highly oil absorbent. Excellent for handling oily, slippery sheets. Porous weave makes them the finest protector for handling lower temperature jobs. **Excellent protection at lowest** cost. We manufacture a complete line of industrial safety apparel. Write for free catalog with price list.

INDUSTRIAL GLOVES COMPANY

1701 Garfield Street, Danville, III.
(In Canada: Safety Supply Co., Toronto)

To be sure



Demand this Trade Mark

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| Lightfoot Schultz Co | Wilkins Co., Inc |
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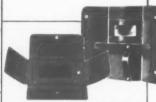
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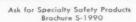
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